Connecticut INDUSTRY

OCTOBER 1954

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Connecticut INDUSTRY

MANUFACTURERS' ASSOCIATION OF CONNECTICUT, INC.

VOL. 32 - NO. 10 - OCTOBER, 1954

L. M. BINGHAM, *Editor*

IN THIS ISSUE

	Page		Page
Editorial	5	Business Tips	49
The Henry G. Thompson Company	6	Business Pattern	52
The Metalix Story	9	Accounting Hints	55
Religion In Industry	12	Industrial Development	57
An Introduction to Statistical Quality Control	16	Spotlight on the Future	59
Export Packing—A Sales Aid	18	Connecticut Advertising Services	60
Hoover Commission Highlights	20	It's Made In Connecticut	61
News Forum	23	Service Section	72
Industrial Relations—Law	45	Advertising Index	72

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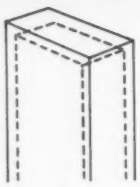
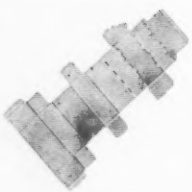
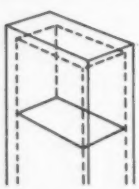
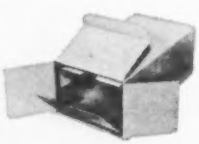
	Double Wall Construction	Breakage eliminated.
	Made from one piece of paperboard.	Take shape automatically. No inner liners required. Economical.
	Separate compartment for two-part products.	Atomizers, two-item promotions, etc. in one unit. No banding or extra boxes.
	Corrugated wrap-arounds eliminated. No "bottle-necks" on automatic packaging machine.	Increased packaging speeds reduce packaging costs.
	Outer wall cut-aways "shadowbox" inner wall package designs.	Unique three-dimensional effects highlight point-of-sale display.

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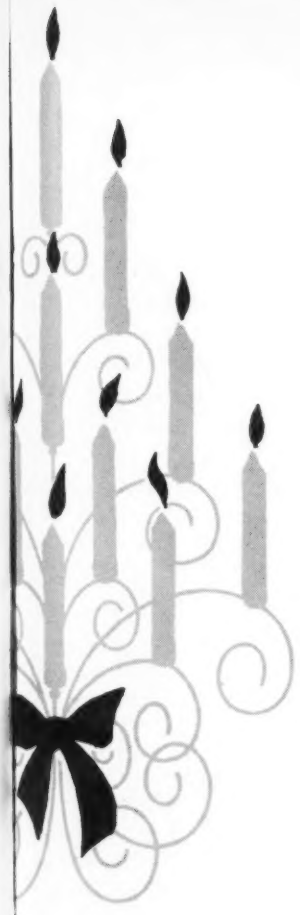

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Is *Automation* for You?

By RALPH S. HOWE, *President**

New Britain Machine Company, New Britain, Connecticut

THE word "automation" has taken on so many meanings and is being presented as such a panacea for curing industrial ills that it seems to be time to sit back and logically appraise it.

In its broadest sense, automation means to do something automatically. In this sense of the word we have had automation ever since the first cave man set a box trap to automatically catch wild animals. Dozens of examples of the primary application of automaticity have been found in ancient and modern history as will be readily admitted by any student of automation. In my own industry, the first automatic screw machine was built about 1873. It was "automatic" because a set of levers and cams was rigged up on a machine to feed the tools into the work—a job which had previously been done by hand. For years we have not only fed the tools automatically, but also mechanically transferred the work, be it bar or casting, from one station on the machine to another.

The basic concept, then, is not a new one.

Today the term has paradoxically become more general and also more specific. More general because it can be applied to everything from human behavior, to temperature control, to selling railroad tickets. More specific because of the additional restrictions of feed back controls; servo mechanisms, automatic sizing and gaging, automatic tool setting, punched tapes and cards, and even elimination of conveyor systems (which at one time constituted the main idea of automation).

This running off in all directions at once has confused us into believing that automation is some kind of magical theory which will solve everyone's problems. No one is able to give you a clear standard definition of it, but everyone can tell you what it will do.

Yet despite all the varied definitions, interpretations, and applications of the term, the automatic manufacture, inspection, quality control, regulation, assembly and even marketing of products is rapidly becoming a part of our new industrial era. In one instance for a new product I know of, where the investment in production equipment already runs into millions, an analysis shows that by increasing the investment by 2.4 times over conventional methods and gaining almost complete automation, the direct labor cost would be reduced to 40% of the original estimate. The movement lacks the one ingredient which must be present in any great new trend and which only time can give—simmering off.

The question now is, "What should each one of us manufacturers do about it?"

To answer this we must first understand the reason behind the modern concept of automation. Interest in the subject has been created by mass production men in the food and chemical processing industries, the automotive and aircraft plants, durable consumer goods fields and basic materials refineries, in search of ways to hold the margin open between rising labor costs, manufacturing costs and the faltering selling prices of a post war buyers' market. Realizing that the only way to reduce overall manufacturing costs was to conquer minute inefficiencies in each phase of their operation, these men analyzed each one separately: receiving, processing, materials handling, inspection, assembly, parts storage, floor space, maintenance, labor, packaging, and paper work. They found that by feeding parts out of a hopper a man could run more than one machine; that by putting a conveyor line between operations, truckers could be released for more productive work; that by rearranging offices, flow of information was faster with fewer costly mistakes; that by buying and storing parts in package units as they were needed in assembly, a considerable amount could be saved in part loss, damage, and ease of assembly.

The mechanical methods developed as a result of this search for greater efficiency we now call automation.

Forward looking editors, industrial students, and process engineers have rightfully seen the beginning of a new industrial era in this movement and have pushed it into prominence—a prominence it deserves when understood but which can lead to disappointments when haphazardly applied.

This modern concept of automation as applied to the metalworking industry is a highly specialized science both as to theory and the application to equipment. It can be profitably employed only in certain industries and then only in certain parts of those industries depending on certain prerequisites.

First, there must be a product which is uniform so that work holding devices, etc. can be standardized.

Second, the product must have a continuous and unfluctuating demand.

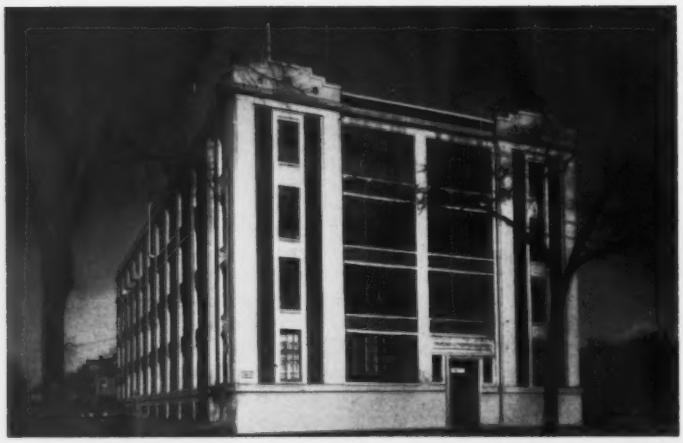
Third, management and labor must be flexible enough to accept sound but complete changes over "we've always done it that way" methods.

Fourth, the product must have a volume sufficient to warrant the purchase, installation and maintenance of the special equipment needed to take full advantage of the benefits of automation, for automation calls for very heavy investments of special equipment, tailored for the job.

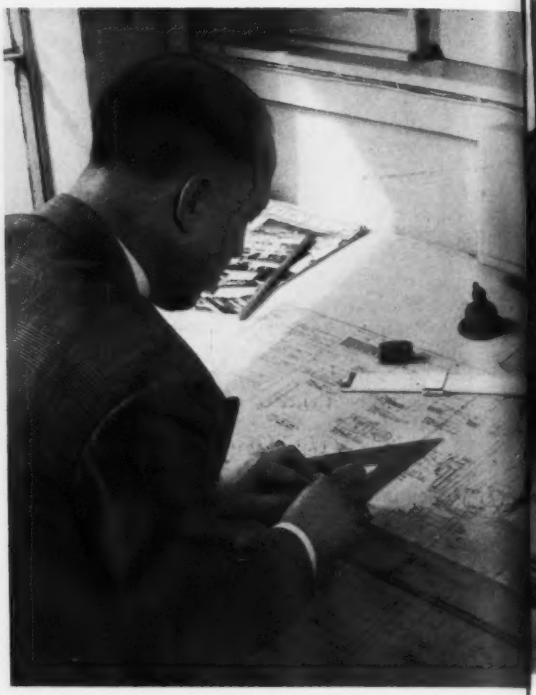
I would suggest that the answer to the question, "What should we do about automation?" is:

Do not try to discover what automation is and then attempt to apply it to your manufacturing processes. Do as the modern mass production executive does. After giving due consideration to all the other economic factors pertinent to your own particular business, examine minutely each of your plant processes with the searching question, "How can I do this faster, better, less expensively, more automatically?"

**Mr. Howe, the author of this month's editorial, after graduating from Cornell University and serving as an engineer in two manufacturing companies and a large management engineering company, joined the New Britain Machine Company in 1920. Made Controller in 1921, he has since advanced through numerous higher positions in the company until he was elected President in April, 1954. One of the best known executives in the machine tool industry, Mr. Howe has served his country as Director of the Metalworking Equipment Division of the NPA and for the past two years has been Special Assistant to the Defense Production Administration, Office of Defense Mobilization. He is a director of the National Machine Tool Builders Association, New Britain National Bank, Liberty Mutual Insurance Company and Storms Drop Forging Co., of Springfield, Mass.*



THE HENRY G. THOMPSON & SON COMPANY'S PLANT in New Haven, where skilled workers and the most advanced saw metallurgy produce MILFORD saw blades that rank with the world's best in quality and performance.



THE THOMPSON COMPANY is constantly striving to improve the quality of MILFORD saw blades by utilizing every metallurgical advance and by designing and redesigning for longer life and greater cutting ability.

The Henry G.

LIKE so many New England firms, The Henry G. Thompson & Son Company of New Haven, manufacturers of hack saw and band saw blades, owes its present position as a leader in its field to the foresight and persistence of its founder. Henry Graham Thompson was a hardy Connecticut Yankee with a flair for invention, a willingness to back up his convictions, and a solid belief in the old adage, "try and try again."

He served his apprenticeship in his father's carpet mills in Thompsonville, and amid the flying shuttles and intricate clattering looms imported from England, acquired a deep interest in things mechanical. In the panic of 1853 the control of the mills passed into the hands of the Hartford Carpet Company,

SPECIALLY SELECTED saw steel must meet exacting standards. Here, raw stock undergoes a Rockwell hardness test before the manufacturing operations begin.

HACK SAW BLADES, after being cut to length, are carefully gaged for thickness. The blades are held to a very close tolerance so that subsequent heat treating operations will result in highest cutting qualities.

ACCURATELY MILLED TEETH ARE COMMON to all MILFORD saw blades. This milling machine is cutting the teeth sections into band saw blades.

...y. Thompson Co.

and Henry Thompson became the New York City sales agent of the company.

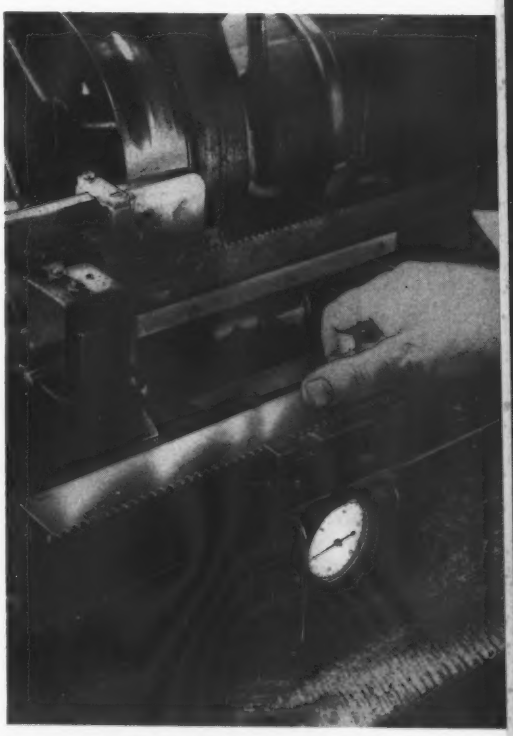
Diversified Interests of Founder

He was highly successful in this work, but was also vitally interested in matters outside his regular business. A rotary engine, which may have been one of the forerunners of the present turbine type, was successful in capturing his imagination. In an effort to perfect the engine, he risked heavily and lost when it failed to meet expectations in a test on a steamboat on the Hudson River.

The sewing of books by machine was another venture, and in this his work contributed largely to the ultimate success of the invention. The first books sewed by machine were Appleton's Encyclopedia, which contained a description of the Thompson book sewing machinery. He subsequently sold his interests in the business to the Smyth Book Sewing Machine Company, whose products later became almost universally accepted by American book binders.

From the sewing of books by thread to the stitching of pamphlets by wire seemed a logical step to Thompson. He erected a small factory in Milford, Connecticut, popularly known as the "steam power factory," where the first wire stitching machine was designed and produced. The device was complicated and costly to build and had to be sold at a high price, in spite of which it enjoyed a fair measure of success. Here, too, was invented a mechanism for tacking the uppers to the innersoles of shoes, which later was developed into the lasting machine.

Then came a period of depression. The yield from the wire stitching machine fell off, and a series of patent litigations exhausted the resources of the small company. Finally, the "steam



AFTER THE TEETH have been milled, machines like this set the teeth to a precisely controlled angle. Here, the operator is checking the set of the teeth of a hack saw blade.

THE COMPANY has pioneered in establishing strong and effective relationships with its distributors. By working closely with the nearly 300 members of its Distributors Advisory Board, the firm has been able to provide greater protection to its distributors and to build a loyal and strong channel of distribution. Field Specialists, with vast funds of practical knowledge on sawing techniques and problems, are available to aid industry at all times.

power factory" had to be given up. But Thompson and his associates refused to admit defeat.

Moving to New Haven in 1880, they designed a new type of wire stitching machine which was a great improvement over the original model. This new design met with such success that prosperity once again rewarded their persistence and courage. Other inventions followed rapidly, among which were motor gears for tram cars, pre-payment gas meters, and a new type of pipe coupling.

Hacksaw Patent Changes Course of Business

About 1885, Thompson purchased a patent which had been issued to cover a "hard-tooth, soft-back" hack saw, and the Thompson Company settled on a line of products that was eventually to make their name known the world over.

A manufacturing process was developed to build the best blades possible, and very gradually Thompson blades gained a foothold in the market. Great difficulty was at first encountered in producing blades of a uniform quality, and to overcome this problem a series of rigid tests were installed which all the saw blades had to meet and pass. Ever since those early days the Thompson Company has continued to use every scientific means at its disposal to build quality into its products.

In 1903, Henry Graham Thompson died, but the company he founded continued to grow steadily, and following the tradition he had set, continued to refine and further develop its products. The trade name of "MILFORD" was adopted for all the products manufactured by the company, and in 1912 the first machine was invented for milling saw blade teeth. Previous to that time, all saw teeth had been formed by punching. A longer blade life and more precise cutting result from the milling process, because the teeth produced are much sharper and more accurately formed.

The "wavy set" for hack and band saws, which makes for tougher blades and the more effective removal of chips was another "first" at Henry G. Thompson & Son. In 1922, the first Flexible Tungsten Alloy hack saw blade was put on the market, and in 1928 the company acquired the patent covering Duplex Easy-Starting Teeth. Fine teeth are milled at the end of hand hack saw blades which make it easy for the user to start the cut in any material.

The most recent MILFORD product is the new REZISTOR High Speed Steel Band Tool which is designed for production cut-off sawing of stainless, die steels, titanium and other hard-to-machine metals. Introduced in March, 1953, the new tool is the first of this kind to appear on the market, and is capable of sawing materials that, up to now, could not be handled economically—if at all—by conventional carbon blades. Made from red-hardness saw steel, the REZISTOR band is specially heat treated to produce tempers suitable for its intended application. Results from the field indicate that the REZISTOR band greatly reduces cutting time and lasts up to thirty times longer than conventional blades.

Although the new tool greatly expands the productivity and versatility of band saws, the machines on the market today are not all capable of realizing the full potentialities of the tool. Fifteen years ago, when carbide cutting tools were first widely introduced, a similar situation existed in the machine tool field. The carbide cutting edge could handle more work, and handle it faster and more accurately, than machine tools of the thirties and early forties were capable of delivering. Machine tool improvements had to be made, and similarly, new band saw machines and conversion equipment for existing machines are being developed today.

In 1940, the company installed a complete metallurgical laboratory which is used to insure MILFORD quality from the raw steel stock to the final, finished blade. The laboratory contains the most advanced testing equipment and devices for metallurgical research. During and after each ex-

(Continued on page 54)

The Metalix Story

Today's Outstanding Example of Traditional Connecticut Manufacturing Enterprise

FROM colonial times, the metalworking ingenuity of the Connecticut Yankee has been a household word across the land. As the country grew to bridge the continent, it was Connecticut's products that helped to defend her borders, build new homes, new factories, new cities—they even clocked the progress of the new nation as it marched into the pages of history.

This enterprise that has always been traditional in Connecticut Industry is still very much alive today at Metalix Manufacturing Company where precision metalworking is an industry and an art.

Metalix is a newcomer in the precision production field, and like most newcomers, its beginnings were small and unpretentious—in rented second-floor quarters in Norwalk, early in 1947. The basis for the incorporation of the new company was a contract to manufacture precision watchmaker's tools, a small staff, and two talented and ambitious young men. But small size and young years are not always a measure of competence, especially in the design and development fields. Perhaps the most outstanding example of this is the company's most recent project completed this spring which embraced the design, development and manufacture of a new type of machine tool.

THE MODERN PLANT of Metalix Manufacturing Co., Norwalk.

The Birth of a New Machine Tool

The Norwalk firm of Howe & Fant, Inc. held patents on a unique self-aligning, rotational drive principle which made possible the first fully workable turret attachment for drill presses in the history of machine tools.

This attachment, called the Lign-o-matic Self-centering Turret, had been produced in limited experimental quantities and fully measured up in every way to its designers' expectations. Howe & Fant, Inc. now faced the problem of producing the attachment in quantity to meet industry demands for this faster, more economical method of performing successive drilling operations. Metalix was given the problem of refining the design of the device primarily to permit quantity production at minimum cost. This work was successfully completed and Metalix has been manufacturing the Lign-o-matic Turret for Howe & Fant ever since.

In the course of experiments and tests of the capabilities of the turret, it became evident that the turret could be used to best advantage in conjunction with a machine tool specifically designed for turret operation. This led directly to an extensive experimental and development program, and the outcome this spring was a completely new kind of drilling machine which promises to do for drilling what the modern turret lathe does for turning.

ARNOLD S. CHARLAT
President

This machine utilizes the same principle that is found in turret-head moving picture cameras and multiple lens microscopes to facilitate rapid changes in drilling tools. However, the basic element in the new machine is the unique centering and driving arrangement which combines rapid, foolproof operation with extreme accuracy.

Six different drilling, tapping, boring or similar operations can be performed in rapid succession with the machine simply by swinging the appropriate tool into operating position. The various tools are mounted in separate chucks and the rotating speed of each can be independently pre-set for the optimum cutting speed for each particular operation. Further refinements built into the machine by Metalix Engineers include independently adjustable precision depth stops for each spindle, and automatic spindle reverse at double forward speed. This reverse feature is actuated by the depth setting

LATHE SECTION of main Metalix manufacturing area.

of the spindle and automatically reverses tool rotation when the proper working depth has been reached. The reversing mechanism is also actuated by lifting the quill raising lever of the machine which makes jog-tapping a simple, single motion operation. The machine has also been designed with fully integrated air and electrical controls as well as a continuously indicating tachometer for setting and checking operational speeds.

Perhaps the most remarkable features of the machine are its extreme accuracy, and the rapidity with which successive operations can be performed. Such steps as tool changing, speed adjustments or moving work from one station to another are eliminated in production applications and, under actual working conditions the machine can consistently produce more than twice the output of as many as three conventional drill presses with appreciable savings in investment and manpower as well. As a consequence, orders for the new machine tool are already beginning to back-log at the Metalix Plant which is currently producing them for Howe & Fant on a contract basis.

Metalix, however, did not always have the personnel, facilities and recognition necessary for a project of this kind. These all came about through a succession of successfully completed development projects for a number of different manufacturers, each of which presented an unusual design problem, or involved applications of precision metalworking techniques.

JOHN J. PAPE
Secretary-Treasurer

Making Ring History

For example, the first important contract for the company was in 1948 when it undertook to develop and manufacture standardized finger-ring gauges for the jewelry industry. Like many fields where hand work predominates, the industry had never established national standards of measurement, and as a result, confusion, waste and even lawsuits were not uncommon.

One of the country's oldest and largest suppliers of watchmaking and jewelers equipment M. J. Lampert & Sons, in order to simplify their own operations, had developed a ring measurement standard which they called "Fitrite." They felt that it offered an answer to the industry's problem provided it could be properly scaled, and suitable gauges designed and produced to meet the practical requirements of the whole field. This was the problem that was given to Metalix to solve.

Before design and production of the gauges could begin, a vast amount of research was necessary. Patent Office records had to be scrutinized for any previous work done along these lines. The National Bureau of Standards had to be consulted in a measurement problem of this kind, and contracts had to be made throughout the industry to determine what measurements would best meet its requirements.

Actual work began with the measurement and tabulation of the countless gauges, sample rings, and measuring devices of every description that were the "standards" then in use. Even a model of the first-known patented conical ring gauge was unearthed, made by F. E. Allen about 1847. The inventor, however, never specified exact dimensions and this led to the irksome problem that grew in significance in the one hundred years the gauges built on the Allen model were in use.

From this accumulated data, Metalix computed an exact scale with identical increments between each of the thirteen sizes—and this was the basis of the new "Fitrite" Standard. The gauges themselves were made in the shape of a wedding band of nickel-finished, tempered brass. Special techniques were required to draw the metal to accurate dimensions without seams, welds, or joints. The new standard, in addition to its advantage as a universal scale, closely approximated the average of the many ring sizes previously used by ring manufacturers, and this facilitated its rapid acceptance by the industry and its adoption as legal standard by the National Bureau of Standards.

This basic and important contribution brought to the new company other development problems in the watchmaker and jewelry field, among them the design of a new watchmaker's tool.

Miniature Drop Hammer

One of the most delicate operations in watchmaking is the staking of the balance wheel in a watch movement. A watchmaker, using a light hammer, can deliver an impact of as much as twelve tons per square inch to the tiny area under the staking punch. Too light a blow produces an insecure juncture, whereas too much force will distort the delicate parts or injure the tool itself. Even with considerable skill and experience, the operation is difficult and the results are not always uniform.

In cooperation with Allen T. Westlake, noted horologist, Metalix set out to find a solution to this vexing problem which was basically one of precise control of applied pressure and impact. Various experiments and designs eventually led to the development of the now patented Westlake Drop Hammer. This small, precise tool incorporates a carefully calibrated weight which can be raised to exactly indexed positions. Releasing the mechanism drops the weight the required distance, much like a conventional drop hammer, and applies a precise impact force to the staking operation.

New Facilities for the New Company

By 1950, Metalix had outgrown its second-floor birthplace and moved to its present modern plant at 26 Fitch Street, in Norwalk. The new quarters provided the space and facilities for a complete, precision production shop with milling, drilling, turning and grinding departments, as well as facilities for electric welding, resistance soldering, and equipment for induction heat treating and chemical finishing of metals. With the move to the new location, too, came an expansion of the engineering and production staff of the company, along with full facilities and instrumentation for inspection and quality control of precision manufacture. Since that time, the company has continued with the expansion of its plant and production facilities to provide the capacity to handle a wide variety of design and development contracts.

New Fields and New Accomplishments

Engineering consultants had begun to hear of Metalix and its ability to solve difficult engineering and development problems, and they brought the growing company into contact with manufacturers in many different fields who needed assistance. The firm developed and produced a wide variety of machinery and tools including a paper folding machine, a potato peeling machine for commercial and institutional use, further precision watchmaking and engraving tool innovations, and a special assembling machine needed by many industries for high speed assembly of products made up of many small components.

With the beginning of the Korean War came an opportunity for Metalix to enter another field where precision metalworking was in great demand—supplying precision aircraft components for the Air Force. Out of this relationship also grew an opportunity for the new company to demonstrate its aptitude in designing and developing new tools. A special deep-hole drilling machine was designed, engineered, and manufactured by the company for government use. This machine, incorporating an hydraulic tool-feed mechanism, is capable of drilling holes over 20 diameters deep in magnesium and other materials with similar characteristics. As a result of these Air Force Contracts, the company at the present time places important emphasis on supplying precision components for all branches of the aviation industry.

The Company Today and Tomorrow

Today, Metalix is a thriving company, still growing rapidly and always looking for new engineering problems in new fields. It presently lists among its clients such concerns as Allison, Homelite, Singer, United Aircraft, International Business Machines, General Motors and General Electric.

In its relatively short history, the company has established a record of engineering development and production achievement that brings smiles to the faces of the two men who first opened its doors, Arnold S. Charlat, President and Chief Engineer, and John J. Pape, Secretary and Treasurer. Both they and the men who make up the Metalix Executive Engineering Staff have firm confidence in the future of the field they have chosen both for its professional rewards and its business opportunities. This belief is evident throughout the organization and is reflected not only in an excellent employe welfare program that includes group health, accident and hospitalization insurance, but such company sponsored projects as a continuous apprentice training program, full paid vacations for employes and regularly scheduled recreational activities. In addition, the company takes an active part in supporting the many worthwhile projects sponsored by both the civic groups and the community of which it is a part.

Although well aware of its relatively modest size and short years, the company takes particular pride in belonging to the Connecticut manufacturing community that has earned such wide recognition for so many years for its manufacturing achievements.

INSPECTION DEPT.—a part of the Metalix program of close quality control.

WORKERS at a New Jersey plant attend a nondenominational, noon-hour religious service. Clergymen of the Presbyterian Synod of New Jersey conduct such services in ten plants.

Religion In Industry

"Not Only To Make A Living . . . But A Life"

By CLARENCE WOODBURY

Editor's Note: **When the daily diet of news and "scuttlebut" rumors seem to point up a trend wherein principle is being subordinated to expediency, it is healthy to observe a counter-balancing trend at the grass roots of American life. Such a counter-balance, in the opinion of *Connecticut Industry*, is provided in this article by Clarence Woodbury, which is being reprinted from the June issue of *Nation's Business* with the permission of the editor and the author.**

AN OFFICER of a large advertising agency invited me to luncheon at the Biltmore Hotel in New York City. Instead of suggesting a cocktail before we ate, he offered me what he referred to as a "spiritual pickup."

We went to a small chapel tucked away in the hotel where we joined a group of other businessmen, several of them executives of famous corporations, who had gathered for a weekly prayer meeting. No clergyman was present and no ritual followed, but I have seldom found a more reverent atmosphere. With heads bowed, those industrialists prayed simply but earnestly for divine guidance in applying Christian principles to their everyday business problems.

That prayer meeting in a busy hotel was just one manifestation of a movement which is making itself felt from coast to coast—the attempt to make religion a part of American industry.

For generations, most businessmen have operated on the theory that spiritual matters are best left to the clergy. Even the most devout have usually hesitated to talk about their religious beliefs during business hours or to introduce them into factory, shop or office. Many have been afraid that, if they did so, they would be accused of proselytizing for their particular faith or having other ulterior motives.

But today businessmen are ignoring these traditional bugaboos.

"If Christianity is good for people on Sunday," they are saying in effect, "why shouldn't it be good for them on the other six days of the week? Let's see if we can't use this faith for everybody's benefit."

These efforts to put religion to practical use on the job are usually attributed to the general rise of public interest in spiritual matters. During the prosperous postwar years we have become, curiously enough, more and more preoccupied with nonsecular things. Church membership is at an all-time high and growing at a faster rate than the population. Mass evangelism has made its greatest strides since the early years of the century. Books on religion or books with religious themes lead the best-seller lists month after month. Religious programs on radio and television bring a bigger audience response than those of many headliners in the entertainment field.

Swept along by this rising tide of spiritual interest, businessmen are using different procedures in their attempts to inject religious faith into industry. It is not possible to appraise,

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statistically, how much they have accomplished, but the magnitude of their efforts is indicated by four developments:

1. In the past five years, about 40 commercial enterprises have hired chaplains to minister to the spiritual needs of their personnel.

2. Prayer meetings or other devotional services of an inter-faith character are held regularly in at least 1,000 companies throughout the country.

3. Laymen's groups, formed by businessmen for the purpose of applying spiritual values to industrial and community problems, have sprung up in more than a score of cities.

4. About 800 companies are distributing religious literature to employes.

The first of these phenomena—the appearance of industrial chaplains—is very new. It is based on the belief that a direct application of spiritual therapy can clear up many difficulties for troubled workers and thus augment their happiness on the job and off. The R. J. Reynolds Tobacco Company of Winston-Salem, N. C., was one of the first to put this idea into effect and the Reynolds program is still considered the major pilot operation of this kind.

In 1949 John C. Whitaker, then company president, became concerned about certain intangible needs of his more than 12,000 employes. In spite of shorter hours, higher wages, and other material benefits, he felt that a considerable number of workers were confused or disturbed most of the time. What they needed, Mr. Whitaker was convinced, was a basic spiritual faith to give meaning and direction to their lives. A devout Episcopalian, he talked over this belief with the chairman of his board of directors, the late James A. Gray, an equally devout Methodist. Together they evolved the idea of hiring a clergyman, the Rev. Clifford H. Peace, and giving him the title of company pastor-counselor.

A former Air Force chaplain, Mr. Peace spent his first few weeks on the job getting acquainted with employes and letting them know he was at their service. He assured them that, if they wished to consult him, they could do so without fear of having their confidences betrayed to their supervisors or others. The employes liked him, dubbed him "the preacher," and soon several came to his office to pour out their troubles.

One of the first was a girl who had become antisocial and a trouble maker after her husband ran away with another woman. Another was a machine operator who couldn't do his work properly because of gnawing worry over an in-law problem at home. A third was a young man with bloodshot eyes.

"I'm whipped, Preacher," he said. "I've been drinking my head off ever since my little boy died and I can't stop. Do you reckon God could help me?"

In each case, Mr. Peace listened to the story and brought religion to bear on the problem involved. Most of his callers had had some kind of faith at one time, he says, or they would not have come to him. Thus he usually concentrated on showing them how they

PASTOR-COUNSELLOR Clifford H. Peace, of Reynolds Tobacco Company plant in Winston-Salem, N. C., assures workers that their problems will be discussed in confidence. Workers often seek advice on personal worries and family crises. The program was started in 1949.

might regain or renew their faith. Often he prayed with them or taught them to pray by having them repeat words after him. At the same time, he frequently suggested practical steps which would help them to solve their difficulties.

From the start, Mr. Peace says, this simple procedure brought results. After a few counseling sessions the girl overcame the heartache which had made her antagonistic, the machine operator conquered his anxiety, and the bereaved father achieved an inner serenity which made it possible for him to stop drinking. Other employes left their problems in the pastor-counselor's office and soon a steady stream of men and women were consulting him.

Between October 1, 1949, and the present, 1,170 employes have called on Mr. Peace for a total of 2,559 counseling sessions. Many others regularly visit a small chapel which the company has provided next to his office for meditation and prayer. When the pastor-counselor walks through the plant, it is not unusual for a foreman to call him aside and say, "Thanks to you, Preacher, Bill Jones is like a new person," or, "Mary Smith is an entirely different employee since she started going to see you."

Top officials of Reynolds, including several who originally opposed the religious program, also are enthusiastic about the pastor-counselor's work. One veteran executive told me recently that, thanks to on-the-job religion, worker morale is higher now than at any time in his memory. Another said he can feel improvement in the emotional atmosphere in some departments.

Mr. Whitaker, now chairman of the company's board of directors, says: "The worst thing you can do to an employe suffering from worry or heartsickness is to leave him alone. There are times when people need to be guided into right relations not only with themselves and other people but with God. We believe that through our pastor-counselor program we are helping many of our men and women not only to make a living but to make a life."

Most other company chaplains use procedures similar to those Mr. Peace employs. Spiritual counseling is their main activity in all cases, but they use different techniques in going about this work.

At Fieldcrest Mills, Inc., Spray, N. C., the Rev. J. K. McConnell, who was appointed company chaplain in 1950, makes regular visits to all departments and the employes are permitted to stop work if they wish to confer with him briefly during duty hours. Hundreds consult him every year in his office and he sometimes does religious work in their homes.

A few months ago a young man approached Mr. McConnell in one of the mills and started cussing his foreman.

The foreman was treating him unfairly, he maintained, but Mr. McConnell found the youth's trouble was rooted in anger and worry over the behavior of his teen-age sister. The girl had fallen in love with a married man and the employe, hurt and angry, was venting his feelings unconsciously on the foreman.

The chaplain solved the problem by visiting the youth's home, enlisting the aid of a devout older sister, and eventually getting the wayward girl to break off her romance and join a church. Her brother now gets along fine with his foreman.

Mr. McConnell also visits sick employes, calls at homes where death has occurred, and occasionally gives religious talks in the mills and at community gatherings.

Executives of Fieldcrest Mills feel that his efforts have been decidedly successful.

At the Goodwill Industries of Dayton, Inc., where jobs and training are provided for handicapped persons, the Rev. Luther Ballou pursues still another course in applying religion to industrial relations. Instead of making his services available only to those who seek them, he visits every one of the corporation's more than 200 employes twice a week and spends a few minutes with each. He does more listening than talking and has found that most workers benefit spiritually by having somebody to confide in.

During the four years that Mr. Ballou has been full-time chaplain of the corporation, tensions between employes have diminished and the general attitude has improved.

Similar reports come from some 30 other companies which have engaged chaplains. Included among them are the Lebanon Woolen Mills of Lebanon, Tenn., the Bristol Manufacturing Company of Fairfield, Ill., the Lone Star Steel Company and Dearborn Stove Company, both of Dallas, the R. G. Letourneau Corporation, with plants in Peoria, Ill., Toccoa, Ga., Vicksburg, Miss., and Longview, Tex., and the Kelvinator Company of Canada at London, Ontario.

The chaplain movement has developed so rapidly and is proving so successful that some enthusiasts predict a time is not far off when company chaplains will be as commonplace as company doctors or social workers. But the majority of religious leaders, including officials of the National Council of Churches, say the continued expansion of the program will depend on the personalities of the clergymen who go into the work, the backing they get from local churches, and the degree of acceptance they receive from labor and management.

Some churchmen fear that labor leaders, adhering unconsciously to the hoary Marxist doctrine that capitalists use religion to exploit their workers, may resist the nationwide increase of chaplains in industry. But there has been no such resistance to date and at least one union has followed the example set by the industrialists. Local No. 12 of the Independent Packing House Workers Union of Kansas City, Kan., has named its own chaplain, the Rev. Bernard W. Nelson, to serve its members.

Not so new as the chaplain experiments, but much more widespread, is the increase in the number of prayer meetings held in plants. There is hardly a city of any size anywhere where you won't see evidence of this phase of the let's-try-religion-on-the-job movement.

For example, when the noon whistle blows at the Sinclair Oil Company refinery at Houston, Tex., hundreds of men carrying their lunch boxes head for an unused pump house which the company has refurnished as a plant church. There the employes attend devotional services conducted by a fellow worker, Harry Sampson, who is a clergyman.

At Sacramento, Calif., a similar service is held every morning at the headquarters of the George Eastman Construction Company. Iron workers, riggers, drillers, and other construction men participate in a prayer meeting before they go to their jobs.

On Baltimore's water front, an equally impressive sight may be observed almost any week day. Dock workers stream to the Baltimore & Ohio Railroad's Pier No. 6 where they cluster around Charles Lee, a Negro sweeper, who leads them in hymn singing and prayer.

These are just three examples of

present-day industrial prayer meetings. No two are alike. They are held at different times, include all faiths and creeds, and usually are quite informal. The majority were started by someone in management, but others grew out of the wishes of employes. Clergymen sometimes attend, and are always welcome, but their presence is not considered essential.

There seems to be one central idea, however, behind all these services—the belief that prayer can contribute to a person's peace of mind on the job. Experiments in a variety of industries support this view.

Consider Gold's Department Store in Lincoln, Nebr. Gongs sound there at 8:59 o'clock on mornings when special sales have been advertised. That is a signal for the 1,000 employes to pause for a minute of silent prayer before the doors are opened to the public. Nathan J. Gold, store president, says this minute of reverent silence puts his clerks in a composed state of mind which enables them to handle the inrushing bargain-seekers with serenity and good humor.

Another businessman who testifies to the value of industrial prayer services is Rollin M. Severance, president of the Severance Tool Industries of Saginaw, Mich., where a 15-minute devotional service is held every morning.

"These services have brought a spirit of brotherhood into the plant," Mr. Severance reports, "because there are no classes under God's laws and prayer brings all men together. People like to work here because of the kinship and peaceful conditions created by prayer. Even during the worst of the manpower shortages we always had men and women waiting for jobs."

Earle Scott, president of the Scott Aviation Company of Lancaster, N. Y., where all activities stop for a prayer meeting each Wednesday morning, shares this opinion.

Just as enthusiastic are hundreds of smaller industrialists who have brought prayer into their plants. Nobody knows how many there are, but they are growing steadily in number and may be found in virtually all lines of business.

Elmer Hedge, proprietor of the Spotless Cleaners of Oklahoma City, conducts a prayer meeting with his ten employes every day; Maynard Powers, merchandising manager of the Enders Company of Benton Harbor, Mich., has started a prayer group in his store; the owner of a dance studio in an Ohio city prays daily with his staff of teachers.

Irwin W. Tucker of Wynne Wood, Okla., has built a small prayer sanctuary in his service station. Mr. Tucker and his six employes—four white and two Negro—often pray there and sometimes customers join them.

That is just one of scores of small chapels that businessmen trying to encourage spiritual activity among their personnel have built since the war. Typical of several built with employe cooperation is one opened last Christmas at the Solar Aircraft Company's San Diego, Calif., plant.

Late in 1952 Edmund R. Price, company president, spoke to his workers: "I'd like to see a chapel here on company property," he said, "and Solar is willing to provide the space, the architectural plans and the building materials. But if you employes want such a chapel at least 50 of you will have to tell me so in writing, and you'll have to do the building yourselves."

Not 50 but several hundred employes wrote to Mr. Price saying they wanted the chapel, and they proved it by turning out with tools in their off-duty hours and erecting the structure. It is now being used by workers and management for a few minutes of prayer each day.

Another striking evidence of industry's new interest in religion is to be seen in the activities of laymen's groups which are trying to bring about a greater acceptance of spiritual values by businessmen.

The best known of these groups is probably the Laymen's Movement for a Christian World which was founded a few years ago by Wallace C. Spears, vice president of the James McCutcheon & Company department store on New York's Fifth Avenue. At that time Mr. Spears was disturbed about the state of human society and called to his home a group of friends, all prominent businessmen, to see if any of them could suggest a way in which the world might be a better place.

The businessmen agreed that the only way in which society could be saved from an eventual breakdown was through a much wider use of religion. Then they resolved to try to find out if there was any workable pattern by which divine laws could be applied to industry, government and other human endeavors. Each man would do this in his own way, it was decided, but they would gather occasionally for an informal prayer meeting and to report their findings.

Without seeking publicity or a large membership, the Laymen's Movement has become nationwide with about 1,400 men, including many Catholics and Jews as well as Protestants, taking part.

Achievements include the settling of serious labor disputes, changing the working atmosphere in several plants, and relieving racial tensions in some areas.

But the laymen tackle small projects as well as big ones and hold themselves ready like "spiritual commandos," as they are sometimes called, to seize religious beachheads when opportunity presents itself. The results are often surprising.

Not long ago, Mr. Spears told me, one of the laymen, a southern businessman, received a pitiful letter from an inmate of a prison about 50 miles away. In his letter the man said he was in need of spiritual help, and the businessman drove to the prison to visit him. To his disgust he discovered that the prisoner appeared to be a "louse" who deserved nothing better than the incarceration which society had imposed upon him.

But the layman reflected that being in jail probably was no fun even for a louse and decided to help the man if he could. He learned that he loved music, knew a good deal about it, and wanted to give a course in musical appreciation to his fellow convicts. So, with the consent of prison authorities, he made available to him a record player, records, and books needed to teach the subject.

A few months later the layman received a glowing letter from the prison warden. The course in musical appreciation had caught on in a big way, he said. Hundreds of convicts had enrolled for it, and music was helping to improve the morale of the whole prison population. Thus, even with the least promising vessels, Mr. Spears points out, dedicated members of his organization have often found they can do the Lord's work.

The Christ Bearers of Pittsburgh, headed by Adm. Ben Moreell, board chairman of the Jones & Laughlin Steel Company, are trying not only to apply religion to business matters but to get more businessmen to overcome prejudices about talking about their faith in public. If religion is good enough to

(Continued on page 41)

An Introduction to

STATISTICAL QUALITY CONTROL

By SAMUEL SIMONOVITZ, *Statistical Quality Control Consultant*
West Hartford, Connecticut

MR. SIMONOVITZ, author of this article, is a Senior Member of the American Society for Quality Control. He is the Instructor of the course in Statistical Quality Control offered by the Hartford Section of that society and of the course offered by The Connecticut State Technical Institute. He is a member and Past President of the Connecticut Chapter of the American Statistical Association.

Direction and Purpose

THIS article is directed to the executives of manufacturing companies that do not use statistical methods to maintain process control or to perform product inspection. Its purpose is to call attention to the proposition that the skill of employees is enhanced by better understanding of plant operations and that techniques of statistical quality control provide a level of understanding not heretofore possible from the traditional operational methods to be found in many Connecticut manufacturing companies. It will explain why certain principles upon which traditional methods are based make it difficult to meet the close tolerances and low AQL percentages required under current contract specifications.

Statistical quality control methods based upon proven principles of scientific research have improved the operational efficiency of an increasing number of companies. It is no longer unusual to be informed of dramatic reductions in cost and of improvement in quality following the establishment of statistical quality control techniques. Companies that are not using such methods should carefully investigate the applicability of a statistical quality control program to their operations. Continued postponement is tantamount to deliberate ignoring of their competitive position.

Although statistical quality control techniques are based upon principles that are mathematical and technical in character and their application can be entrusted only to properly trained personnel, the basic approach and objectives are readily understood by most experienced and interested executives. Books, trade publications, and the journals of the technical societies have provided a body of knowledge, during the past decade, that explained the techniques that have marked the development of the new science of statistical quality control. This article will consider only a few of the basic principles in such manner as to demonstrate their applicability and to indicate that further investigation by such companies is warranted.

SAMUEL SIMONOVITZ

Variables

Manufacturing personnel know that differences will be found between successive units passing through an operation. Such variation is due to the combined effects attributable to variation in material, machine, and operator performance. It is built into the operation by the engineering decisions that selected the material, designed the preceding operations, selected the machine, trained the operator, and organized every activity that directly or indirectly affects the operation. There is an inherent pattern of variation resulting from the interaction of so-called "non-assignable causes" which combine at random when the operation is stable. This pattern can be measured statistically and its natural tolerance can be computed.

If the natural tolerance is in excess of the specification tolerance, non-conforming units will be produced. If the natural tolerance is less than the specification tolerance, non-conforming units may be produced when the operation is not stable or when the average level of the operation is not properly centered. A pattern of variation in excess of the natural tolerance or an average level not properly centered is indicative of variation due to assignable causes. At such times, corrective action must be taken to reestablish the stability of which the operation is capable. This can be done, however, only if the natural tolerance of the operation has been determined and a reliable basis for measuring instability has been provided.

If the units of a production lot are grouped in dimensional categories or cells and plotted on a chart and the totals of such cells are connected by a line, the resultant curve will approach the symmetrical bell-shaped "normal" curve. The average dimensional cell ($\overline{X}$) in this distribution (Figure 1) has the greatest frequency of occurrence and the frequency decreases as dimensions are found to vary from the average.

It should be apparent from the distribution that because of the differences between the relative proportion of the

units in the various dimensional cells, the probability of the random selection of a unit having the average dimension is greater than the probability of selecting a unit having any of the other dimensions. Conversely, the probability of the random selection of a unit having either of the extreme dimensions is very small. In fact, it can be expected that units having the extreme dimensions may be included in the sample very infrequently. Unless this is clearly understood and made a part of the method of analysis employed by the operator in his periodic inspection of units out of the stream of product, samples selected by him will not indicate the complete range of dimensions that can be expected from the operation. An effective sampling method must provide a basis for estimating the range of dimensions that usually extend beyond those contained in the sample.

Under the traditional method of process control, an operator is supplied with a fixed gage set to specification limits. He is instructed to select a sample unit periodically and to continue the operation until one or more units are found beyond specification limits. This procedure is based upon the erroneous assumption that units at the extremes of the distribution and units in the other cells have an equal probabilit of being selected in the sample.

As can be anticipated, the operator using the traditional method of process control, usually continues the operation until he finds beyond specification limits a unit that is at or near the average of the distribution. Neither he nor his supervisors who designed the method realize that at such time a considerable percentage of the units that make up the distribution are also beyond specification limits and that an increasing percentage of non-conforming units were produced as the average dimension approached the specification limit. This method is frequently responsible for the fact that the operator who adheres strictly to such instructions can truthfully state that every sample unit inspected by him was within tolerance limits and yet be confronted by evidence that the production lot contains too many non-conforming units. Under such circumstances, the percentage of non-conforming units which is an inverse measure of his skill is determined not by his ability to make fine adjustments in the operation but by the inability of the sampling procedure to inform him when adjustments are necessary. His skill is impaired because he

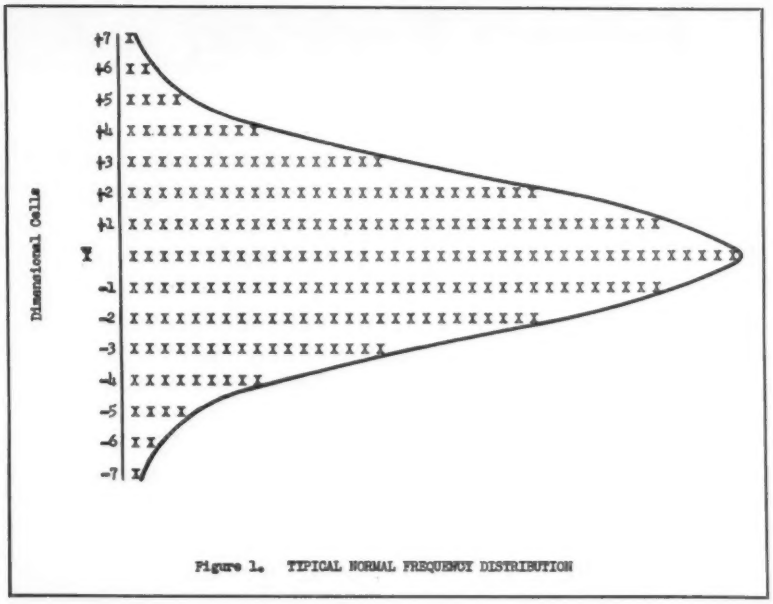


Figure 1. TYPICAL NORMAL FREQUENCY DISTRIBUTION

is compelled to make too few adjustments.

The operator soon learns that strict adherence to such instructions does not permit the production of the maximum number of acceptable units. He therefore tries to establish limits less than those set by the gage by working within arbitrarily chosen limits based upon the looseness or tightness of the units in the gage. Such methods of instrumentation lack the precision necessary for proper control. Because he has no measure of the inherent variation of the operation and because an adjustment in the average level is usually the easiest one to make, the operator working on this basis usually makes too many adjustments in the average level. Such practice increases the range of dimensions resulting from the operation and defeats the purpose for which it is intended. Perplexed, indeed, is the operator who carries this practice too far by alternately raising and lowering the average level of the operation after each unit. Such practices are based on conjecture rather than knowledge and poor results are inevitable.

The method of verification of conformance to specifications under the traditional methods is 100% inspection. Experienced executives know that 100% inspection is not always 100% effective. In fact, not even 200% or 300% inspection of some production lots can be relied upon to screen enough of the non-conforming units to meet current AQL standards. When large numbers of units are examined by inspection personnel, fatigue, monotony, and the image of the many preceding acceptable units retained in the inspector's memory lower the efficiency of this extremely important function.

Inbuilt Quality—Key to Efficient Production

A basic principle of statistical quality control is that quality should be produced at the machine rather than at the inspection bench. Effective process control based upon statistical methods of analysis can be designed to reduce the percentage of non-conforming units received from the machine. Such method is preferable to reliance upon uncertain inspection methods to identify and screen them out after they have been produced.

Statistical quality control methods provide first for a careful analysis of the operation to determine its natural tolerance. This provides the measure of the probability of selecting random samples from each of the cells of the frequency distribution and of estimating at a predetermined risk level the average and extreme dimensions produced by the operation at the time each sample is taken. From these statistics, a control chart is designed to show graphically whether the average dimension and the range of dimensions in the sample are within limits to assure conformance of product to specification tolerances.

(Continued on page 40)

Export Packing – A Sales Aid

By HANS H. BOHLMANN, *Export Manager*

The Seamless Rubber Company, New Haven, Connecticut

Editor's Note: **This is the sixth in a series of articles dealing with the principle facets of export trade and how to exploit them. Together these articles supply some of the most essential elements of knowledge necessary to the successful conduct of business in foreign markets.**

HAVING secured an order in spite of the efforts of his competitors to outsmart, undersell and "out-style" him, the exporter still cannot pat himself on the back for a job well done until the precious order is delivered to the customer overseas without loss or damage.

This aspect of exporting is what makes traffic managers slink around with that hunted look and causes loss of sleep to experts who experiment with export packing. If a shipment arrives at its destination without incident, everyone takes it for granted, but if it goes astray, suffers damage, is the victim of "pilferage" or is unduly delayed, it counts as a black mark against the exporting manufacturer, who is wise to take careful precautions against this type of bad advertising, which may mean permanent loss of customers.

"Export packing" means getting a product prepared to pass through different kinds of climates and able to withstand all kinds of rough handling, because even though steamship lines and other carriers do their best in this respect, somewhere along the line strange treatment is often handed out to the hapless package now unprotected by its solicitous creators.

Of necessity, export shipments undergo a greater number of transfers than domestic ones. They must be forwarded to the steamer, loaded and unloaded, passed through customs at the country of destination and finally delivered to the customer, who is often located inland where only primitive means of transportation may be available. While the export shipment is on the vessel, it may be stowed near the bottom of the hold with tremendous loads resting on top of it. The shipment may be going to a hot, humid climate or at least spend some time passing through one, which must be considered along with all other factors.

H. H. BOHLMANN

Export packing is bound to cost more than domestic packing because so much more is expected of it but the exporter can often effect economies by careful investigation of special types of export packing and frequent rechecks about new and improved methods. It is a good plan in this respect to follow current developments in export packing as reported in leading export shipping and trade magazines. "The Digest of International Developments—Containers," available from the U. S. Department of Commerce is another publication that reports on international news in the containers industry. Information about new packing techniques and materials is available from such organizations as the Export Packers Association of New York, Brooklyn 15, New York. Exporters also know that many marine insurance companies, with a view to reducing claims for loss and damage, will advise on the latest methods of packing for overseas shipments. Besides, a booklet, "Modern Export Packing," published by the U. S. Department of Commerce, can prove very useful. The EXPORTERS' ENCYCLOPAEDIA, published by Thomas Ashwell & Company, Inc., New York 7, N. Y., is considered by many American exporters as an indispensable tool. As the name implies, it includes special packing and marking instructions for each foreign country and is kept up-to-date by frequent supplements.

Nevertheless, it's a good idea to get packing instructions from a customer in a *new market*, as the customs laws in the country of destination may determine the type of packing to be used. Also when an exporter decides to change the style of packing, it's wise to ask the overseas customers if, in their opinion, it is an improvement over the old one.

Specific problems about packing methods can often be solved by the exporter's foreign freight forwarder who has vast experience with these matters. In his own organization, an intelligent and conscientious traffic manager is indispensable in his effort to achieve effective export packing.

By the use of the most modern methods and materials, it is even possible sometimes to reduce the cost of the packing to such an extent as to be able to lower the prices of the goods exported, thus making them more competitive.

When it comes to the method of packing much has been learned and is still being learned by trial and error. Medium sized machinery is usually shipped in wooden cases. Heavy machinery is crated and the crates strongly reinforced. Machines consisting of a number of parts are disassembled and the parts packed separately, the machines themselves being securely bolted to the cases or crates. Cases should be just big enough to hold the machine so it does not slip back and forth, weaken-

ing the closures. A rust protective coating should be applied in exporting machinery.

Glass products and other fragile items are often shipped in large export cartons with interior separators or reinforcements to minimize breakage. Textiles and other soft resilient goods often travel very well compressed into bales provided they are securely wrapped in heavy waterproof paper to guard against moisture.

It pays to investigate the types of packing for especially heavy articles, that may be subject to a special hoisting ("heavy lift") fee as modern, lighter weight packing may eliminate this fee altogether.

Because of the high cost of shipping goods for export in wooden cases, fiberboard cartons secured by steel straps are being used more and more. They have been found to be much stronger than was at first supposed and have the added advantage of less weight and space.

Often wooden crates are used to hold a number of small export cartons or they are simply strapped to facilitate handling and prevent loss in transit.

On rare occasions, an exporter of heavy equipment for example may decide to take a chance on shipping in less costly domestic-type packing. This he may do when the steamship company specifically agrees to give the cargo top stowage, and when the shipment will pass through very limited handling after the ocean voyage. Generally, however, export shippers shy away from such a practice because they know that the saving in packing, even if relatively substantial, can easily be more than offset by loss or damage to the goods, with consequent inconvenience to the buyer.

According to statistics, losses due to improper packing exceed those caused by basic maritime hazards including fire, sinking and collision. This is another reason for the great need of improved export packing.

Pilferage sounds like a dilettante pastime, and sometimes it is, when due to temptation caused by damaged containers. However, more often it is enthusiastically carried on by organized groups who learn to spot certain kinds of containers by their appearance or identifying marks. Exporters find this plundering a continual nuisance and loss, and one of the ways to get around it is to change the appearance and identifying marks on overseas shipments.

In the marking of packages there are a number of points to consider to insure safe arrival at destination. To avoid fines and other complications, the exporter is careful to comply with foreign customs regulations, when he marks his containers. So that they will not be lost or delayed the destination and identifying marks are put on with indelible ink or paint with a brush or stencil. Sometimes the regulations specify that they be at least two inches high, but since anything much smaller would be hard to read it is just a common sense rule. The sign "MADE IN U. S. A." is plainly marked on all goods for export. Some countries require that the marks on the container must agree with those in the accompanying shipping documents, so that if there are other marks on it than refer to products in the package, the recipient is fined.

American exporters are aware that overseas shipments financed by Foreign Operations Administration (FOA) are subject to special marking requirements. Information in this respect is obtainable from the FOA Office of Small Business, Washington 25, D. C.

Cautionary marks on containers such as "THIS SIDE UP" or "FRAGILE" or "HANDLE WITH CARE" or "GLASS" help to reduce shipping losses and at the same time are vague enough so as not to encourage theft of the goods inside. Hook damage can be lessened by marking cases with "USE NO HOOKS."

If the container is covered with marks of all kinds it is confusing at each point of transfer, and could be responsible for its going astray. Another reason to reduce marks to a necessary minimum is that it helps prevent pilferage. A package that advertises itself as containing choice consumer goods, such as radios, mechanical devices or indeed almost anything, is much more tempting than one blandly uncommunicative as to contents. Some exporters make it a point of changing at intervals, the identifying symbols of their principal overseas consignees. Articles that are shipped unwrapped or in bales should be stamped or painted in the same way as other containers as tags are often torn off en route.

Packing lists, placed in the containers are sometimes required but always desirable, since they provide positive identification in case of need. If more than one package makes up a shipment, packages should be numbered consecutively (some countries require this) and regulations in some countries require that the gross and net weights in kilograms appear on the containers.

Import duties, if they are specific, based on so much per number, weight or volume, have a direct bearing on the type of packing to be used. For example, El Salvador, Honduras, Costa Rica, Colombia, and Venezuela calculate specific duties on the gross weight, which includes the weight of the goods and all inner and outer packing. In other words, the packing is subject to the same duty as the articles themselves. In such instances, therefore, customers often specify that the goods are to be supplied in bulk packing. It is then particularly important that the shipping containers themselves be as light as possible, yet strong enough to insure safe arrival at final destination.

Other countries, including those that make up the British Commonwealth charge specific duties strictly on the net weight of the goods. In such cases, duty on packing is figured at a different, generally lower rate. There are other areas where customs laws specify a certain deduction from the gross weight for the weight of the container, also known as "tare." "Legal net weight" is the term usually applied to this kind of weight. Logically, goods packed in sacks have a low tare deduction; those in cases have a higher deduction than in crates or baskets. The weight of the goods plus the inner packing, which may be the immediate container of the individual item, excelsior, or other packing material, is known as "plain legal weight."

Tariff laws of a number of countries give special meanings to the terms "gross weight," "legal weight," and "legal net weight." For example, the Dominican Republic designates the "net" weight as the weight of the merchandise plus that of the immediate container and the weight of the cardboard if the goods come attached to it.

Ad valorem import duties, being based on a percentage of the value of the goods, have no relation to packing.

Nothing makes the foreign buyer happier than a consignment of goods, unscathed by a long journey and reposing safely in his warehouse. This discussion has touched on some of the strands that are twisted into the good stout rope that stretches between the exporting manufacturer and his overseas customer. When export packing is accomplished to their mutual satisfaction, this will serve as an aid to expanding export sales.

Hoover Commission Highlights

By EDWARD SHERMAN, *New England Regional Director*

Citizen's Committee for the Hoover Report

Record of the First Hoover Commission

EVERY member of Congress voted for the Lodge-Brown Act which created the first 12-man bipartisan Commission on Organization of the Executive Branch of the Government. The Act was signed by President Truman on July 7, 1947. At the initial Commission meeting, held in the White House, former President Hoover was named Chairman.

Besides Mr. Hoover, the Commission included: Dean G. Acheson, Vice Chairman, George D. Aiken, Clarence J. Brown, Arthur S. Flemming, the late James V. Forrestal, Joseph P. Kennedy, Carter Manasco, John L. McClellan, George H. Mead, James K. Pollock, and James H. Rowe, Jr.

Based on researches of 24 highly qualified committees, or task forces, the Commission submitted 19 reports to Congress in 1949. These contained 273 recommendations for strengthening the structure of the Federal Government. Of these 273 recommendations 196 or 72% have been adopted and are being put into effect. Eventual annual savings from these measures will approach four billions.

Among the major accomplishments which have resulted from the first Hoover Commission's endeavors are:

1. Better teamwork in the Armed Services was developed by the National Security Act Amendments of 1949. Speed in meeting the Korean crisis was the result.

2. More efficient "housekeeping." The new General Services Administration combined four previous agencies. It rapidly went about cutting out duplication and waste in Federal purchasing, storage, inventory control, records management, and building operations.

3. Internal reorganization of the State Department, clarifying staff responsibilities and expediting action in many areas.

4. A modernized Budgeting and Accounting System paved the way to the greatest Federal fiscal advance in three decades.

5. The Labor Department was rebuilt to Cabinet stature.

6. Modernized accounting procedures were initiated in the Post Office Department, eliminating much delay and duplication.

7. The corruption-ridden Bureau of Internal Revenue was taken out of politics.

8. A new Department of Health, Education and Welfare was established.

9. The Department of Agriculture was reorganized and many of the Commission's proposals for that department were put into effect.

10. Airline subsidies were separated from payments for the carrying of mail.

The Second Hoover Commission

As the 83rd Congress entered its final months, 30 major recommendations of the first bipartisan Hoover Commission on Federal Reorganization remained unenacted. Meanwhile the second Hoover Commission has begun extensive researches. Following closely on the pattern of its predecessor, the Second Hoover Commission (also officially known as the Commission on Organization of the Executive Branch of the Government) was unanimously created by Congress under the Brown-Ferguson Act signed by President Eisenhower on July 10, 1953.

The Presidential appointees are:
Herbert Hoover, Chairman
Attorney General Herbert Brownell, Jr.
The Honorable James A. Farley
Director of Defense Mobilization Arthur S. Flemming

The Vice President's appointees are:
Senator Homer Ferguson
Senator John L. McClellan
Dean Solomon C. Hollister of the School of Engineering at Cornell University
Dean Robert G. Storey of the School of Law at Southern Methodist University

The Speaker's appointees are:
Congressman Clarence J. Brown
Congressman Chet Holifield
The Honorable Joseph P. Kennedy
Mr. Sidney A. Mitchell

Ten Task Forces

The Commission established ten Task Forces as follows:

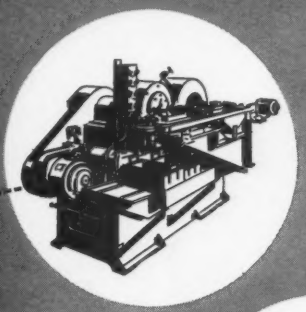
Budget and Accounting
Business Organization of the Department of Defense
Legal Services and Procedure
Lending Agencies
Medical Services
Personnel
Procurement
Subsistence Services
Use and Disposal of Federal Surplus Property
Water Resources and Power

Of this new Commission Herbert Hoover recently said, *"The major purpose of this Commission is to find ways and means of saving money for the taxpayer."*

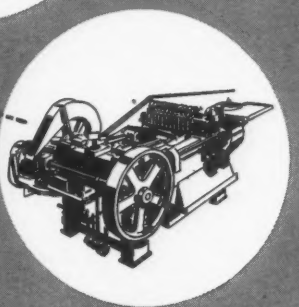
Congress gave the first Commission very limited authority. The present Commission has an almost unlimited authority to inquire and make recommendations. The present Committee is required to prepare and present the actual legislation necessary to carry out the Commission's recommendations. Our former President says in regard to the possible results of the new study of government, "From discussions with officials and task force leaders I am convinced that if we could secure all our desires from the Congress, we could save five to seven billions of dollars per year without injury to the necessary functions of the government. Those sums are equal to 15% to 20% of the personal income tax."

It is not expected that the new Commission will publish much in the way of findings until after election. However, the broad base of operation, the teeth given by Congress to the new Commission allowing it to cover policy questions and subpoena documents and persons gives rise to taxpayer hopes for even more in the way of results than was realized from the first Hoover study.

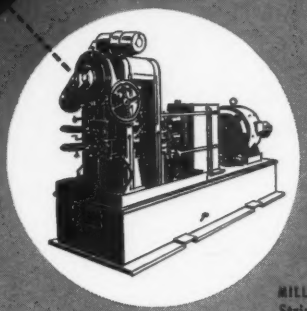
5 KINDS OF WATERBURY FARREL ANSWERS TO YOUR MASS PRODUCTION PROBLEMS



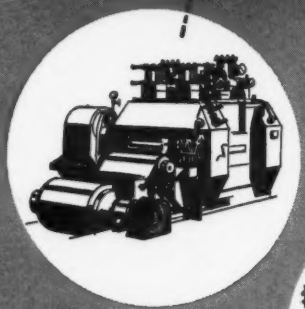
COLD PROCESS BOLT & NUT MACHINERY — Headers (all types) • Rivet Machinery • Trimmers • Thread Rolling Machines • Slotters • Nut Formers and Tappers, etc.



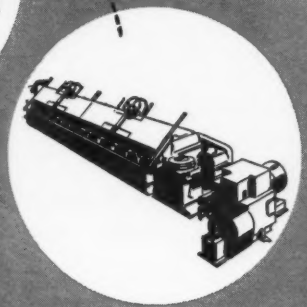
POWER PRESSES—Crank, Cam and Toggle; also Rack and Pinion Presses • Eyelet Machines • Multiple Plunger Presses • Horizontal and Hydraulic Presses, etc.



MILL MACHINERY — Rolling Mills: Strip, Rod, Wire Flattening, (For Ferrous and Non Ferrous Metals) • Also Slitters • Straighteners • Cut-off Saws • Coilers • Winders, etc.



SPECIAL MACHINERY — Sendzimir Mills • Small Arm Ammunition Machines • Collapsible Tube Machines • Coining Mills, etc.



WIRE MILL EQUIPMENT — Continuous Wire Drawing Machines (Upright Cone and Tandem) • Wire Flattening Mills • Chain Draw Benches • Pointers • Swagers • Bull Blocks • String-up • Machines • Spoolers, etc.

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Waterbury Farrel can custom-engineer special equipment or adapt a standard machine to fit your specific problem.

For further information, write for free booklets on any of the machines mentioned on this page or contact your nearest WF office.

HERE'S A SAMPLE of Waterbury-Farrel mass production equipment in action. This complete WF automatic production unit combines a 40-ton double-acting, upright blanking and cupping press, a conveyor feed and four 7-station horizontal drawing presses to draw 340 zinc shells per minute.

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THE FLASH FIRE THAT NEVER HAPPENED

This is about a man who lit a fire to prevent a fire.

He was visiting a small machine shop. The work going on was something the shop had never done before — grinding and sanding magnesium castings. He noticed one man grinding castings while magnesium dust piled up on his bench and his clothing. The man was smoking.

The visitor scooped up a handful of the dust and walked to the yard with the worker and the foreman. He put the dust on the ground and touched a match to it. It flared like a sparkler.

Startled, the foreman jumped to stamp out the flames, only to see them shoot out beneath his shoe.

"Now you've seen how a fire-bomb worked in the war," the visitor said. "And why some operations on magnesium require special precautions. A wet grinding method is a must. No smoking is another."

The visitor was one of Liberty Mutual's loss prevention engineers, making a regularly scheduled visit to a policyholder's plant. His job is to turn to the policyholder's advantage his experience as an engineer of the largest writer of Workmen's Compensation.

This incident gives you a glimpse of only one phase of "Humanics" — the most complete program ever devised by an insurance company to cut down loss in industry. Humanics increases profits by eliminating the uninsured cost of accidents as well as by cutting insurance costs. For information, call the nearest Liberty Mutual office, or write to us at 175 Berkeley Street, Boston 17, Massachusetts.

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NEWS FORUM

This department includes a digest of news and comment about Connecticut Industry of interest to management and others desiring to follow industrial news and trends.

EDWARD M. MAMULSKI has joined the staff of the Association as Traffic and Export Manager.

Mr. Mamulski replaces Nicholas Maarschalk, who left MAC to take a transportation position with the American Can Company of New York City.

A native of Easthampton, Mass., Mr. Mamulski has been associated with the Boston and Maine Railroad Company and its subsidiary, the Boston and Maine Transportation Company, since 1938. He left the Boston and Maine in 1943 to serve until 1946 with the U. S. Navy. His tour of duty in transportation involved the movement of troops.

Mr. Mamulski is a product of the Easthampton school system and a graduate of Northeastern University with a B.B.A. Degree with honors in Transportation and Traffic Management.

With MAC Mr. Mamulski will deal with transportation problems of all types and the problems of the Connecticut exporter as they relate to internal policies, customs, exchange or trade to all foreign countries.

EDWARD M. MAMULSKI

R. WALLACE & SONS MFG. CO., Wallingford, received national recognition recently, being cited as an example of how to stay in business 100 years. In the August issue of "Nation's Business" an article entitled "How to Stay in Business 100 Years" discussed the policies and planning which made it possible for the Wallace firm to continue to grow since 1835.

The article says in part, "To get specific answers, we decided to study the methods of one representative American firm. We sought a company in a small town, because in a small town a sizeable old enterprise carries enormous social responsibility. Its community depends on it for work and taxes. Its disappearance at any time could bring disaster to the local economy.

"Moreover, we sought a business which had been in the hands of a single

The Cover

THIS MONTH'S front cover shows a laboratory technician at the Henry G. Thompson Company plant examining microscopically samples of blades to determine the smoothness of the low point between adjacent teeth.

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family since its inception, rather than one which had changed ownership frequently. In this way it would be easier to measure the value of a continuing business philosophy."

The magazine interviewed Donald Wallace Leach, a great-grandson of the founder of the firm, Robert Wallace. Mr. Leach revealed that through the company's 119 years it has lived by the philosophy set down by its founder, " . . . spair no panes to get your work in the best and most graseful shape and perfect finish, and your business will increase every year." These words of wisdom were included in some instructions written by Mr. Wallace for the use of his five sons.

According to the Wallace experience, the basic formula for a long and successful business life as reported by "Nation's Business" includes quick adaptability to new methods, new products, new materials; constant research toward better and even dissimilar products; adherence to the theory of mass production, low profits, wide distribution; liberal labor policies, based on the recognition of labor as a partner in an enterprise; a sense of civic responsibility."

★ ★ ★

THE PROMOTION of Frank R. Dellitt as sales manager, dealer division, Underwood Corporation, has been announced by W. F. Arnold, vice president.

Mr. Dellitt, who has recently been branch manager of the typewriter and office machine firm at Rockford, Illinois, joined the company immediately after his graduation from local schools in Dallas, Texas in 1937.

★ ★ ★

A REVISED BULLETIN has just been released by The A. W. Haydon Co. on their line of miniature hermetically-sealed Time Delay Relays for either A. C. or D. C. units.

The bulletin, which gives design features and mentions detail characteristics and factors which might determine type of timer to be used, is available from the company which is located at 230 North Elm St., Waterbury.

★ ★ ★

EDWARD McCULLOCH has been appointed to the position of general sales manager of the Russell & Erwin

HARTFORD *Special*
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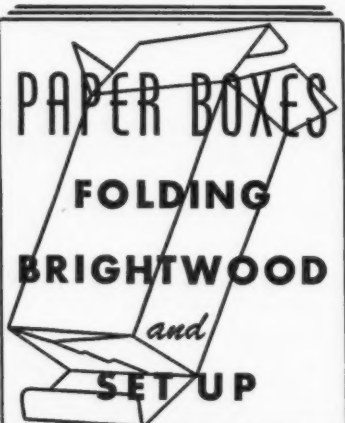

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Division of The American Hardware Corporation, New Britain.

Mr. McCulloch has been associated with Russell & Erwin since 1945 as a territorial representative in Connecticut, Florida-Georgia, Washington-Baltimore-Philadelphia, and San Francisco.

Mr. McCulloch replaces Robert M. Tucker, who has been named director of sales and marketing research.

Mr. Tucker has been associated with The American Hardware Corporation since 1928. He has represented the Russell & Erwin Division in a number of territories, managed its New York office and prior to his becoming general sales manager, served as assistant sales manager.

★ ★ ★

FRANCIS T. EDDY, formerly assistant superintendent of the Waterbury Mfg. Co., Division of Chase Brass and Copper Co., Waterbury, has recently been named assistant manager of Technicraft Laboratories, Inc., Thomaston.

A graduate of Brown University, Mr. Eddy was elected third vice president of the American Electroplaters Society at the annual convention of the Society recently.

Mr. Eddy will be in charge of sales, manufacturing operations, including production, purchasing, and factory engineering.

★ ★ ★

THE PERKIN-ELMER CORP. of Norwalk and Pitney-Bowes, Inc., of Stamford, have released details of component parts they completed two years ago for the prototype of the U. S. Navy submarine Nautilus, launched in January at Groton.

The facts, as cleared for publication by the Department of Defense, revealed that the special internal periscopes required for viewing the nuclear reactor prototype of the atomic-powered Nautilus were jointly created by Perkin-Elmer, prime contractor and maker of the optical systems, and Pitney-Bowes, which designed and constructed the mechanical and electric elements.

Built for a full-scale "land-based" model of the Navy's first "SSN" (submarine, nuclear), the periscopes, or viewers, are forerunners of others expected to contribute to the civilian use of atomic power. The periscopes enable the crew to maintain watch on the reactor without being exposed to radiation.

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OFFICIALS of Landers, Frary & Clark, New Britain and the Dazey Corporation of St. Louis, Missouri, complete plans for purchase of the latter company by Landers. Shown above are Bret C. Neece, at right, president of Landers, and William E. Gundelfinger, president of the Dazey Corporation.

lems confronted by Perkin-Elmer and Pitney-Bowes were ones involving the heavy "shock-load" specifications required in a craft subject to near-miss aerial bombs, shells and depth charges. As a result, the mechanical and optical components were built to withstand stresses up to 60 times the force of gravity, roughly 10 times the shock resistance required for aircraft equipment.

★ ★ ★

THE PURCHASE of the net assets of the Dazey Corporation, of St. Louis, Missouri by Landers, Frary & Clark, New Britain, has been announced. The purchase includes subsidiaries of the Dazey Corporation except for the Loyd Scruggs Co., of Festus, Missouri.

Bret C. Neece, president of Landers, Frary & Clark, announced there will be no change in the operating management of Dazey, which makes non-electrical kitchen products. The Dazey product line will be added to the present Universal vacuum goods and hardware lines and will be sold by the Landers sales organization.

ALFRED J. PORTER, a vice president and director of Heppenstall Company, Pittsburgh, steel forgings manufacturer and manager of the company's plant at Bridgeport, died suddenly at his home in Bridgeport on August 11.

Mr. Porter served as president and director of Heppenstall Company, Bridgeport, a subsidiary, since 1942. He was elected a vice president of the parent company in February this year.

Son of the late Alfred J. Porter, Sr., a former general superintendent of the Bridgeport plant, Mr. Porter first became affiliated with the company in 1914 as a part time laborer in the forge shop. He served successively as night superintendent of the forge shop, superintendent of heat treating, production manager, salesman, sales manager, and manager.

Mr. Porter is survived by his widow and two daughters. A brother, Raymond T. Porter, is vice president of Heppenstall Company, Detroit, another subsidiary of the Pittsburgh company.

★ ★ ★

A NEW SYSTEM providing dictation facilities at the lowest cost in the history of the dictation equipment industry has been announced by The Gray Manufacturing Company, Hartford.

The new product, called the Phon-Audograph III, is said to give users dictation equipment for as much as one-third less than comparable competitive systems and promises to open up large markets previously closed to the industry because of cost factors. According to Walter E. Ditmars, president of the company, the system will have an impact on the industry similar to the introduction of the first electronic dictating machine after World War II.

The method utilizes a single centrally-located recorder, to which may be connected from one to twelve individual dictating instruments, resembling standard telephone handsets. Gray's "Add-a-Unit" plan provides for expansion of the system by tying in additional recorder-transcriber units as needed.

Among the features of the Phon-Audograph I system, introduced by Gray two years ago, which are retained in the new PhonAudograph III are, according to the manufacturer, push button control of playback, marking of corrections, marking of end of letters, and direct communication with the recorder attendant through the user's dictation instrument.

THE APPOINTMENT of Ronald V. Bennett as general sales manager for the Fabricating Division of Plume & Atwood Manufacturing Company, Waterbury, has been announced by Thomas I. S. Boak, president of the firm.

For the past eighteen years Mr. Bennett has been connected with the Winchester Division of Olin Industries. He has served as eastern division manager, field sales manager, assistant sales manage, and most recently sales manager of the electrical division.

A NEW wide-strip electronic recorder for measuring and recording both current and voltage simultaneously on one chart has just been announced by The Bristol Company, Waterbury. The primary measuring elements of this one-case instrument are said to be a thermal-voltage converter and a thermal-current converter, a-c/d-c transducers.

The chart is divided into two zones. Half the chart is used for recording amperes, the other half for volts. The calibration of each follows the law of

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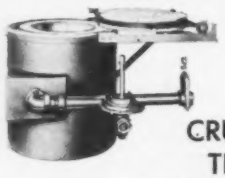

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★ ★ ★

THE WALLACE AVIATION CORPORATION directors have elected Samuel H. Parks, treasurer and controller.

Mr. Parks was born in Uniontown, Pa. He is a graduate of the University of Pittsburgh School of Business Administration. During World War II he served as Battalion Adjutant in New Guinea and as Personnel Officer for the Coast Artillery Redistribution Center at Fort Bliss, Texas.

Before joining the Wallace Aviation Corporation he served as controller of Electrol Incorporated, manufacturers of hydraulics for the aircraft industry. Prior to that he served as treasurer and controller of Henry B. Nevins, Inc., shipyard, builders of yachts and navy vessels.

★ ★ ★

THE HALLDEN MACHINE COMPANY, Thomaston, has announced the appointment of John Upton, Jr. as general manager. Mr. Upton was formerly with The Wean Engineering Co., Inc., Warren, Ohio.

★ ★ ★

NEW 2-Jaw Power or Scroll Operated Indexing Chucks have been announced by the Cushman Chuck Company, Hartford. The new chucks have been designed and engineered for holding workpieces having opposing and angu-

AN EASILY PORTABLE multi-purpose lock for use by travelers and in home, office, school or factory is now being distributed nationally by The Yale & Towne Manufacturing Company. Known as the Yale Travelok, the device is small enough to be carried in pocket or purse, and can be used to lock securely cabinets, closet doors, lockers, desks and other storage places not having built-in-locks.

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• American retrospective appraisals establish unit property records with individual costs, depreciation reserves and provisions —
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The First National Bank of Windsor Locks states that their choice of Barney's for office furniture is based on "the right combination of reasonable prices, quality selections, and wonderful service". Why not try this combination yourself? It works right well for many of Connecticut's leading companies.

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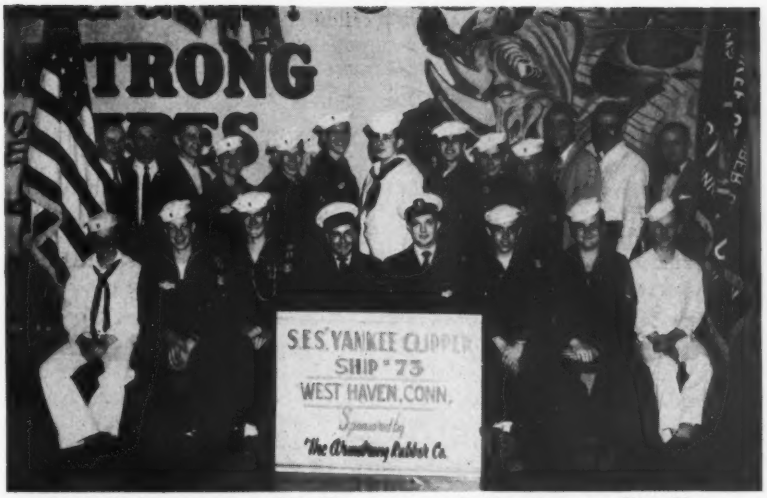
lar surfaces in specific relation to one another, thereby permitting precision machining of all faces without having to unload and rechuck the workpiece.

The chuck body has two arms extending outward from the face and on which are mounted special master jaws. The master jaws are actuated by levers and move in and out in relation to the center of the chuck face plane. Centered on the master jaws are the revolving jaws which rotate at right angles to the master jaw action. Formed jaws, which actually hold the workpiece, are fastened to the revolving jaws, permitting the workpiece, though securely held, to be rotated between the master jaws.

★ ★ ★

THE SPONSORSHIP of a Sea Scout troup composed of boys over fourteen years of age has recently been announced by The Armstrong Rubber Company, West Haven.

The Sea Explorer Ship Yankee Clipper #73, as the new organization is called, meets every Monday evening at the Armstrong plant for instructions and drills.



SEA SCOUT troop sponsored by The Armstrong Rubber Company, West Haven.

A 24-foot plane personnel boat secured from the Department of the Navy is being renovated by the boys. The sea-going vessel was presented to the Sea Scouts to be used in learning the whys and wherefores of sailing.

Armstrong's industrial relations director John Marchiando is institutional representative for the group.

THE STATE OF CONNECTICUT'S Purchasing Division, which buys about $20,000,000 worth of commodities and services each year, has announced plans to revise its mailing lists for invitations to bid on purchases, and establishing a new system which will make it easier for suppliers to do business with the state.

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. . . and for o'er thirrrty yearrrs I've been making my customers RRReally Happy with

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CALL JACK WITTSTEIN

Box 1348, 56 Church Street
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Corrugated and Solid Fibre Boxes
Merchandising Displays

New application blanks are available for invitations to bid on future purchases. This application includes a complete listing of the types of items purchased, and the supplier may indicate those categories of which he should like to be notified of bids to be let. He will then receive all such notices for those categories.

The new system of notifying prospective bidders is based upon a classification and coding of the many thousands of items bought by the state for more efficient handling of purchases.

★ ★ ★

THE BRISTOL BRASS CORPORATION has announced that it has concluded an agreement with Brace-Mueller-Huntley, Inc., of Syracuse, New York, one of the largest distributors of metals in the East, to distribute Bristol Brass products in New York state, Northern Pennsylvania and Western New England.

The announcement, made by Roger E. Gay, Bristol Brass president, and Maxwell Brace, president of Brace-Mueller-Huntley, Inc., stated that the New York distributors will use their warehouses at Albany, Syracuse, Rochester and Buffalo to stock Bristol Brass rod, strip, wire and shapes for distribution to customers.

★ ★ ★

THE PECK, STOW & WILCOX COMPANY of Southington, has announced the adoption of a program of expansion in its machine tool division. This is the division in which sheet-metal working equipment is manufactured. Machine tools not heretofore made will be engineered and added to the broad line now produced.

In addition, it is planned to make another completely new line of industrial equipment which will be added to the foregoing and will be manufactured in Southington.

Plans to terminate the manufacture of hardware hand tool lines at Southington and the transfer of operations of that division of the company to Hartford are under way.

★ ★ ★

THE APPOINTMENT of Tracy Fabian as area development consultant for the United Illuminating Company, New Haven, has been announced by William C. Bell, president of the company. Mr. Fabian, who has been serving as assistant to the general superintendent, Marshall F. Beebe, will make his headquarters in the company's New Haven office.

In his new position he will be available for consultation to all establishments in the UI territorial area, on matters involving commercial and industrial development.

"The UI Company is interested in increasing industrial production in present industries, as well as helping to attract new industrial and commercial enterprises into its service area, which includes New Haven, Bridgeport and surrounding towns," the announcement said. The new program of the UI will be under the supervision of E. B. Haskell, manager of the commercial and industrial department of the company.

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Have the machine tailor made to fit your product

- Combine several operations into one automatic machine.
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- Release valuable floor space for other production.

Firm prices quoted for Engineering and/or manufacturing.

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Call on us today to discuss your problem.

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WALPOLE • NEW HAMPSHIRE

TO FACILITATE increased production of all types of welded pressure vessels, machinery bases, components, and assemblies, Acme Welding, division of The United Tool & Die Company, West Hartford, have just broken ground for a 120-foot addition to one of five plant buildings on their 15-acre tract.

This new manufacturing capacity, according to Acme Welding's general manager, G. A. Firestone, will speed fabrication of very large weldments and will also increase the efficiency of the firm's recently-instituted X-ray service.

★ ★ ★

FARREL - BIRMINGHAM COMPANY, INC., has announced the election of Donald A. Comes as vice president. He will also continue to hold his present position as general sales manager.

Mr. Comes has been connected with Farrel - Birmingham Company since 1922. He was a sales representative in the New Jersey territory for a number of years, and was particularly active in developing the use of Banbury mixers in the rubber, plastics, linoleum, paint and other industries.

In 1943 he was transferred to the Farrel-Birmingham main office at Ansonia, as manager of the Banbury Mixer Department. In 1946 he was promoted to the position of assistant general sales manager and last year was named general sales manager.

★ ★ ★

THE HEPPENSTALL Memorial Scholarship for 1954 has recently been awarded to Alfred E. Richards, Jr., of Trumbull, whose father serves as supervisor of the standards department of the company's Bridgeport plant.

Valued at $3,000, the scholarship covers a four year course at Pennsylvania State University. A similar award is made annually to the son or daughter of an employee of Heppenstall Co., steel forgings manufacturer, in memory of C. W. Heppenstall, Sr., president of the company from 1923 to 1939.

★ ★ ★

TWO EXECUTIVE APPOINTMENTS have been made by the Edwards Company, Inc., Norwalk, manufacturers of electrical signaling, communication and protection equipment.

At a meeting of the Board of Directors, Thomas S. Nolan, formerly vice president in charge of marketing was elected executive vice president. Assistant treasurer Eugene P. Werner of Wilton was elected treasurer and secretary and made a director. He replaces the late treasurer, E. P. McHugh.

★ ★ ★

JOHN T. LAWLESS, president of the American Felt Co., Glenville, recently accepted a plaque from William G. Ennis, deputy commissioner of labor in Connecticut, citing the completion of 500,000 man hours of operation by the plant without a single lost-time injury.

The presentation of the plaque by Mr. Ennis was in behalf of Liberty Mutual Insurance Co., which holds the mill's compensation insurance.

★ ★ ★

I. NEWMAN SONS, INC., New Haven, one of the oldest corset manufacturers in the country, has voted to change its name to Sarong, Inc., after the revolutionary type girdle it has made since 1947.

The company was organized in New Haven in 1875. The Newman family sold its interest in the firm in 1923.

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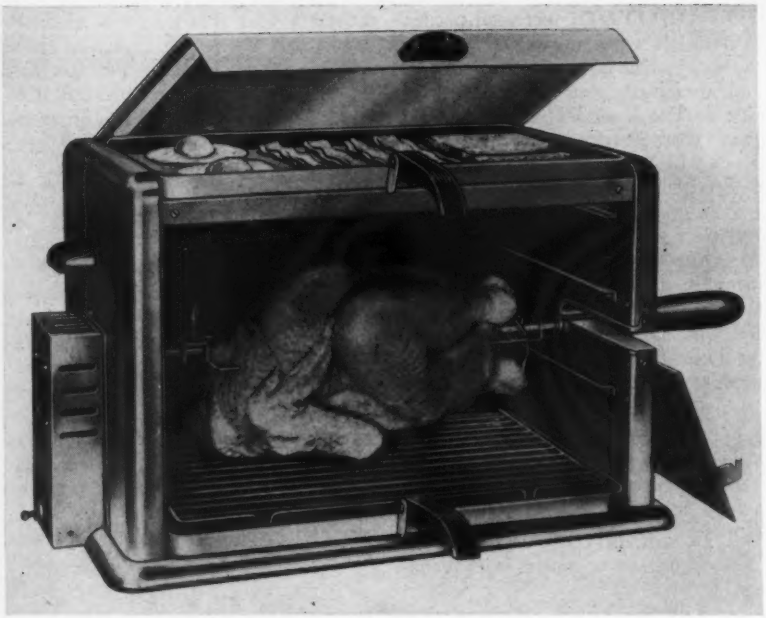

THIS INFRA RED ROTISSERIE is one of the newest products of Capitol Products Company, Inc., Winsted. Available for both home and restaurant use, the combination rotisserie and broiler features six cooking methods, barbecue, broil, roast, grill, fry and toast.

GEORGE W. BERGER, chairman of the board of directors of The Berger Brothers Company, New Haven, has announced the appointment of Adolph J. Merkt and Frederic W. Loeser as directors of that organization and also as vice presidents of its sales subsidiary. In the latter capacity, both men will work directly with Spencer M. Berger, executive vice president of Spencer, Incorporated.

The company recently celebrated the 50th anniversary of its founding. It is one of the world's largest producers of individually-designed supports and foundations, with manufacturing and sales subsidiaries in Canada and Great Britain.

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SHOWS BEST WHERE YOU STAND
. . . WHAT YOU NEED . . . HOW TO SAVE
PREMIUM

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EDGE—Slit or Rolled

Coils or Cut Lengths — All Tempers
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PORTSMOUTH DIVISION, NEW BOSTON, OHIO

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Cold Rolled Carbon Steel Strip
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produced at
DETROIT MILL DIVISION, DETROIT, MICHIGAN
EASTERN MILL DIVISION, HAMDEN, CONN.

Use Warehouse Sheet or Strip?

Buy for Profit the RELIANCE *Job-Fitting Way*

- to satisfy your job's fabricating requirements in gauge, size, workability and finish.
- to meet your job's economic requirements through lowest costs consistent with market conditions.
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AN EXECUTIVE of Acme Shear Company, Bridgeport, was recently elected president of the Shears, Scissors and Manicure Manufacturers Association at its recent annual meeting. He is Basil C. Deuschle, vice president and general sales manager of the Bridgeport firm, and the Acme Shear Company of Canada, Ltd.

Before his association with this firm, he was president of Fairfield Furniture, Inc., Westport, and for 17 years was with the General Electric company as an accountant and merchandising specialist.

★ ★ ★

THE ACQUISITION of the Sight Light Corporation, of Deep River, by American Machine & Foundry Co. has recently been announced.

Morehead Patterson, board chairman and president of the American Machine & Foundry Co., revealed that Sight Light will "continue to do its regular business." He also announced that Earl I. Canfield, president and founder of Sight Light, and Charles S. O'Connell, secretary, will remain in their executive positions in Deep River.

At present Sight Light designs, developes and produces electrical systems and ordnance devices, primarily for the United States Navy. The corporation was founded as an electrical engineering and development firm in 1933 with its first offices in New York City. It was incorporated in Connecticut and the company moved to Essex late in 1936 to continue its research and development.

★ ★ ★

THE LEES MANUFACTURING CO., Westport, has ceased operations because of marketing conditions, the board of directors has announced.

Founded in 1814 by John Lees, the firm manufactured candle chandlers' and miners' wicks, cotton twines, cords, fringes and ribbons, and has numbered four generations of Lees as its managers.

★ ★ ★

THE BOARD OF DIRECTORS of the Acragage Corporation, Milford, has announced the election of Robert Bruce as president. Mr. Bruce served as vice president and general manager since last November.

He was formerly with International Business Machines Corporation in Washington, D. C.

Allen L. Pfaff was named vice president and sales manager.

Ideas Surveys

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NEWTOWN, CONN.

★

Sales and Merchandising Consultant

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Floor Sweeping
COMPOUNDS

Sweep up dust, dirt fast in office, plant, warehouse

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From an ounce to 1000 lbs. each.

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THE
NUTMEG CRUCIBLE STEEL
COMPANY
BRANFORD CONNECTICUT

A COLORFUL BROCHURE listing manufacturing premises available for sale or lease in Connecticut has been mailed by the State Development Commission to more than 1500 industrialists in the New York metropolitan area, it has been announced by Charles F. Coates, Commission chairman.

The brochure was prepared by the state agency with the cooperation of the larger electric companies doing business in Connecticut. It lists 28 seperate factory units that are now wholly or partly idle and available to manufacturers needing space. The 28 plants are located in 22 separate Connecticut communities and represent a total of 1,731,197 square feet of plant space.

In an accompanying letter, industrialists needing more space for future expansion were reminded that industrial building sites to meet individual manufacturing requirements will also be found by the Development Commission.

★ ★ ★

THREE new vice presidents have been elected by the board of directors of Veeder-Root Incorporated, manufacturers of computers and counting devices, it has been announced by John H. Chaplin, chairman of the board.

Elected were Keith D. Graham, Andrew J. Rebmann, and Leon J. Dunn.

Mr. Graham has been with the company for 38 years, beginning as a stock clerk with the Root Company of Bristol, one of the two companies merged to form Veeder-Root in 1928.

Mr. Rebmann has been secretary of the company since 1952 and assistant treasurer since 1947.

Mr. Dunn has been assistant to the president, Harvey L. Spaunburg, since March of this year. Prior to that he was assistant to the executive vice president. He joined Veeder-Root in 1942 from the New York firm of consulting engineers, Ford, Bacon and Davis.

★ ★ ★

THE KELL-STROM TOOL CO., INC., of Wethersfield, has just released an informative brochure describing in detail the engineering and research, electronic and machining facilities and services the company offers to industry.

The brochure features illustrations and facility lists covering each of Kell-Strom's three divisions as well as specific production jobs which the firm is equipped to perform.

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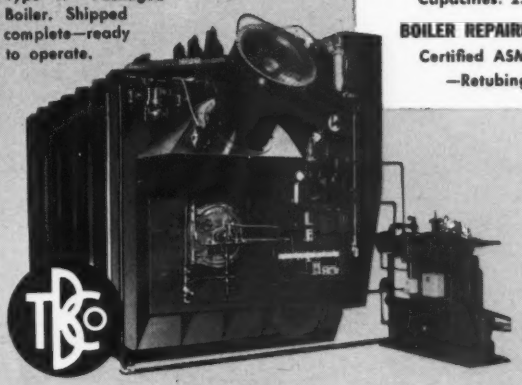
Type H "Packaged" Boiler. Shipped complete—ready to operate.



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REPRESENTATIVES IN PRINCIPAL CITIES

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OR WRITE TO 422 ELM STREET

NEW HAVEN ENTHONE INCORPORATED CONNECTICUT

THE ROUND BRIDGEPORT CHAIN AND MANUFACTURING COMPANY, Bridgeport, along with seven other firms throughout the country affiliated with the Cleveland Chain and Manufacturing Company, has been purchased by the Republic Steel Corporation, of Cleveland.

The Bridgeport plant will be known as the Bridgeport Round Chain division of Republic Steel.

Officials of the Bridgeport company stated that for the present the plant will continue to manufacture complete weldless chain, chain fittings, wire forms and metal stampings.

★ ★ ★

THE SALE of the Hartford Steel Ball Company, Hartford, has recently been announced. The principal investor in the new company, to be known as Hartford Steel Ball Company, Inc., is Payson & Trask, a New York private investment firm specializing in financing industrial properties.

The company, in announcing the change in top officers, revealed that the founders and senior stockholders wished to retire from active management.

Stephen V. Zavoico has been named president of the new company, and T. H. Abbott is vice president, the same post he held with the former company. Albert P. Hildebrandt, of Payson & Trask, will be treasurer, and Dean K. Worcester has been appointed secretary and Miss G. Helen Davies, cashier of the former company, has been named assistant secretary and assistant treasurer.

Mr. Zavoico resigned as president of the Eagle Lock Company, Terryville, in May. Mr. Abbott joined Hartford Steel Ball in 1940 and four years later was elected vice president.

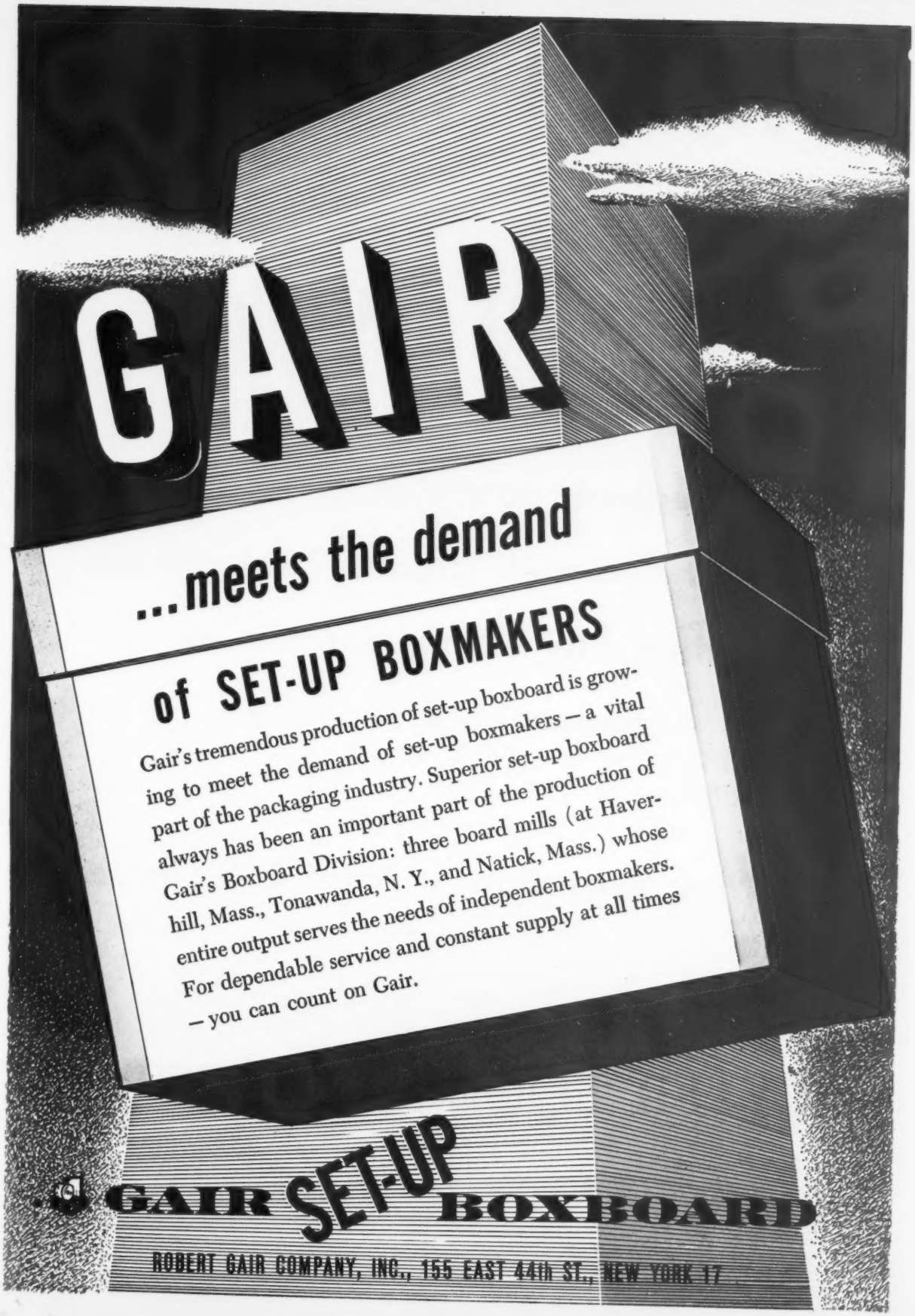
★ ★ ★

THE RESIGNATION of R. M. Terry as executive vice president of Abbott Ball Company, West Hartford, has been announced. Mr. Terry has accepted a similar post with the Seymour Manufacturing Company in Seymour.

★ ★ ★

THE RETIREMENT of Leslie McArthur as vice president of Niles-Bement-Pond Company, West Hartford, has been announced by President and General Manager, A. H. d'Arcambal.

Mr. McArthur had been with the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...meets the demand
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Gair's tremendous production of set-up boxboard is growing to meet the demand of set-up boxmakers — a vital part of the packaging industry. Superior set-up boxboard always has been an important part of the production of Gair's Boxboard Division: three board mills (at Haverhill, Mass., Tonawanda, N. Y., and Natick, Mass.) whose entire output serves the needs of independent boxmakers. For dependable service and constant supply at all times — you can count on Gair.
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Fast, rugged, powerful . . . Heavier in weight and with greater horsepower than any tractor shovels of comparable capacity

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Tel. Southington 8-7331

company since 1947, and until recently managed its Chandler-Evans Division, which manufactures aircraft engine accessories.

★ ★ ★

HARVEY W. NICHOLSON, has recently been named sales manager of the Rubber Sundries Division of The Seamless Rubber Company, West Haven.

Mr. Nicholson, who has been with Seamless since 1920, has been assistant sales manager of this division since 1944. His first job at the company was in the personnel department, and a year later he was made a member of the production office. In 1921 he was made an assistant foreman of the department handling inspection and packing. He has been a member of the sales department since 1924.

★ ★ ★

THE APPOINTMENT of Frederick H. Fippinger as New England sales manager for the Cushman Chuck Company has been announced.

Mr. Fippinger has been associated with the firm since 1936, first as a member of the engineering department and later as sales engineer. He has served as factory manager for the last eight years.

★ ★ ★

WARREN G. STANNARD has assumed the posts of vice president and general manager of the Poly Choke Company of Tariffville.

Prior to joining Poly Choke Mr. Stannard was associated with the Chandler-Evans division of Niles-Bement-Pond Company and Charles E. Lowe Company.

★ ★ ★

THE UNITED STATES Treasury Department presented a special citation to Chase Brass and Copper Co., Inc., recently for its outstanding record achieved in the promotion of the payroll savings plan for the purchase of U. S. Savings Bonds.

The award was received by Richard C. Diehl, president of Chase, on behalf of the company, and was presented by Kenneth M. Crane, state director of the Connecticut Savings Bonds Division of the Treasury Department.

COMPLETE PROTECTION AGAINST
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at moderate cost!

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ALTA-CO POWDER

Now more efficient than ever, ALTA-CO kills *in less than a minute* all different species of fungi commonly found in Athlete's Foot. Non-irritating; harmless to towels.

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For dusting feet after shower.

H. D. FUNGICIDE FLOOR WASH

Additional protection against Athlete's Foot.

Ask your DOLGE SERVICE MAN about money-saving offer on the DOLGE FOOT TUB.

For **FREE** SANITARY SURVEY
of your premises consult your
DOLGE SERVICE MAN

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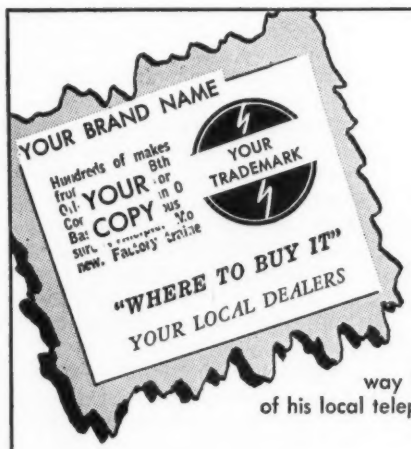

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CHARLES HENRY STOKESBURY, founder of the Derby Casting Company, Seymour, and former chairman of the Derby Board of Education, died recently at Griffin Hospital.

A native of Derby, Mr. Stokesbury received his degree from the Sheffield Scientific School of Yale University. He was later employed by the Chase Brass and Copper Company in Waterbury. In 1920 he organized the Derby Casting Company.

The company is engaged in the manufacture of castings and non-ferrous metals and at the time of his death, Mr. Stokesbury was treasurer of the company.

Mr. Stokesbury is survived by his wife, one son, a daughter and a grandson.

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UPON the death of the owner of a business — be he proprietor, partner or stockholder — his executor must fix a value on the business interest for estate tax purposes . . . including the value of his good will.

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Costly litigation can be avoided if business owners make an analysis of the possible valuation of their business for estate tax purposes.

To assist the business owner, Connecticut Mutual has published a description of methods of valuation in common use by taxing authorities. This information is available free and without obligation. Just write or phone for copy of "Methods of Evaluating A Business Interest."

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An Introduction to Statistical Quality Control

(Continued from page 17)

Control charts are effective because they show the operator when an adjustment is necessary and, of equal importance, when to continue the operation without change. For some operations, they will also indicate the rate of change and thereby provide a better basis for determining when samples should be taken. To the extent that fewer samples are found to be required and less time is spent in the selection and gaging of sample units and in the adjustment of the operation, production is increased.

Important gains result from the reduction in the costs of scrap and rework. Reduction of the range of dimensions within and between production lots permits more effective control of subsequent operations. Effective statistical process control provides the level of assurance necessary to permit sampling inspection of production lots to replace the 100% inspection of individual units. The principle upon which such choice is made is based on the proposition that 100% inspection of an acceptable production lot is a pointless and expensive waste of time. Furthermore, every decrease in the number of times that units are handled in the plant reduces the probability of damage. Some companies have found this factor to constitute an important determinant of product quality.

It is hoped that executives will discuss this brief introduction to statistical quality control with their engineering, production and inspection personnel. If interest is aroused for more understanding of statistical quality control, they should be urged to become members of the American Society for Quality Control. The three Connecticut sections of that society offer courses of instruction and provide speakers to discuss the many principles and techniques that comprise the science. For information regarding membership, inquiries

should be addressed to: Hartford Section—Albert E. Aubin, Gray Mfg. Co., Arbor St., Hartford, Conn.; New Haven Section—E. O. Edelman, Armstrong Rubber Co., Elm St., West Haven, Conn.; Southern Connecticut Section—Alfred Korn, General Electric Co., Boston Ave. & Bond St., Bridgeport, Conn.

Religion In Industry

(Continued from page 15)

listen to in church it is good enough to discuss in other places, the Christ Bearers maintain, and they claim to have had considerable success in getting Pittsburgh industrialists to "speak out for God" in their offices, plants and clubs.

In Des Moines other organizations, called Fishermen's Club because members literally follow Christ's words ("I will make ye fishers of men"), canvass their neighborhoods and ring doorbells inviting people to declare their faith. A good many businessmen balked at this idea at first, it is said, but have come to approve. They have been astonished, several report, by the cordial reception accorded them in most homes, and by the satisfaction they get out of the work.

Other groups of businessmen currently are active in Los Angeles, Chicago, Detroit, Kansas City, Nashville, Tenn., and other cities.

The Nashville group calls itself Businessmen for Religious Action and is comprised of a number of Nashville's leading industrialists. The group has adopted as its slogan, "Worship God More in '54." The organization is planning to sell Christianity by speeches to civic clubs, film strips, window posters, pamphlets, car tags, and printed inserts for public utility bills.

Two other effective methods for revitalizing community interest in religion were demonstrated recently by the United States Junior Chamber of Commerce in its sponsorship of a month-long "Come to Church" campaign and a special "May Day-Pray Day." The latter was a day of prayer for world peace, significantly timed to coincide with the annual communist holiday.

If there were no other evidence of the interest American businessmen are taking in things spiritual, the tremendous increase in the amount of religious literature distributed to industrial personnel would establish the point. Not since the Victorian era, when some businessmen gave theological tracts to their workers, has there been anything like the spate of religious printed matter which employes receive today. Unlike the old-fashioned tracts, however, the modern pamphlets avoid doctrinal controversies, never mention brimstone or hell-fire, and stress inspiration.

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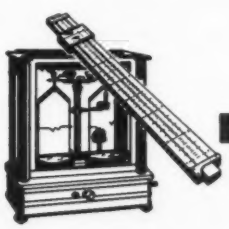

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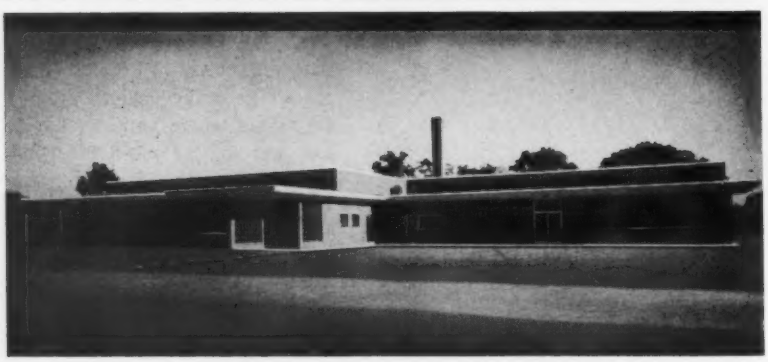

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lications is *Guideposts*, a non-profit monthly magazine edited by Dr. Norman Vincent Peale, pastor of the Marble Collegiate Church of New York City, and supervised by an editorial board on which Protestants, Catholics and Jews have equal representation. Started in 1944 on an investment of $1,000, *Guideposts*, as described by Dr. Peale, is "an Horatio Alger magazine packed with religious success stories." It now has a circulation of 650,000 and hundreds of corporations distribute it to their employes. These include such industrial giants as United States Steel, General Motors, Eastern Airlines, the Hilton Hotels, the J. C. Penney Stores and the S. S. Kresge Company.

Dr. Peale attributes the popularity of *Guideposts* and other religious publications to a constantly growing conviction among businessmen that they need religion personally, that faith must become part of industry if freedom is to survive, and that belief in God makes better human beings.

"During the past ten years I have helped more than 800 business presidents and personnel executives to relate religion to their firms," he says, "and I have not seen the slightest indication that any of them are using religion insincerely or for material advantage."

Not all clergymen are as enthusiastic as Dr. Peale about industry's new concern with spiritual matters. About half of them seem to regard it as part of a genuine spiritual ground swell which eventually may sweep the entire business community and revolutionize our way of life. But the others are more skeptical. Some feel that the current religious zeal of certain businessmen is a natural reaction after decades of extreme secularism.

It is splendid, these clergymen say, if industry is becoming more aware of the existence of the Deity and behaving in a more moral and decent manner. But there is a vast difference, they maintain, between applying Christian principles to business situations and completely accepting formal religion with its age-old demands for mystical transfiguration and utter selflessness. The millenium, they think, is about as far off as ever.

Which viewpoint is correct remains to be seen, but most lay observers view industry's broad and continuing movement away from purely materialistic standards as an encouraging trend.

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INDUSTRIAL Relations — Law

By FREDRICK H. WATERHOUSE
Counsel

THE readmission of the Russians into the International Labor Organization (I.L.O.) has created a problem so vital it affects the very existence of the organization itself. A noteworthy survivor of the ill-fated League of Nations, and presently an agency of the United Nations, the I.L.O. was established on a tripartite basis. Each member country—and any country which is a member of the United Nations is eligible for membership—is entitled to four voting delegates; two representing government, one representing employees, and one representing employers. The primary purpose of this arrangement was to give full opportunity of expression to the three divergent points of view in the hope that the problems common to all three groups would be openly and frankly discussed and a common ground of agreement thus developed. Such progress can continue only where each of the three groups—worker, employer and government—is completely free of domination by either of the others. One of the essential principles of the I.L.O. is "the freedom of Employers' and Workers' delegates to represent their constituents without government instructions or interference and to speak and vote freely without governmental control."

The readmission of Russia has jeopardized this basic concept. The question was squarely presented to the session of the I.L.O. held in Geneva, Switzerland, in June of 1954 by challenging the seating on committees of so-called employer delegates from the totalitarian countries. The delegates from the United States and some other free countries agreed that there are no "free employers" in Russia. The government is the employer. Consequently, any employer delegate from Russia is nothing more than another government delegate. The same is true of the employee delegate. He is not a delegate from a "free association of workers." He is a government delegate.

The employers concisely stated their position by quoting from a Moscow publication. "In view of the fact that the means of production belong to the Socialist State, the management of the undertaking is a direct function of the State, which represents the fundamental and vital interests of the entire Soviet population. The Soviet director of the undertaking . . . is the representative of the Socialist State." How can he express a "free management" viewpoint? How can he vote different from what government, his employer, dictates? Since he can do neither, he is not fulfilling the functions of a free employer delegate and so should not be admitted as such.

The employee delegate from the United States stated the substance of his objection by pointing out: "It is clear that the trade unions in Soviet Russia have become the instruments of enforcing the economic policies and programs of the Soviet Communist Party. In addition to not representing the economic interests of the workers, the trade unions were being used, are being used and will continue to be used and abused, as an enforcing agency of Communist exploitation."

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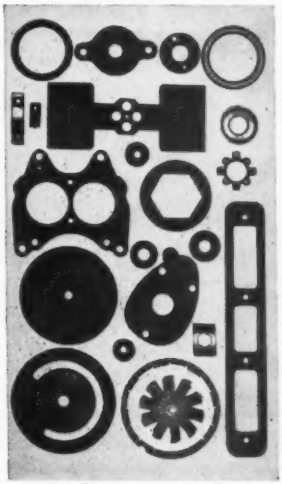

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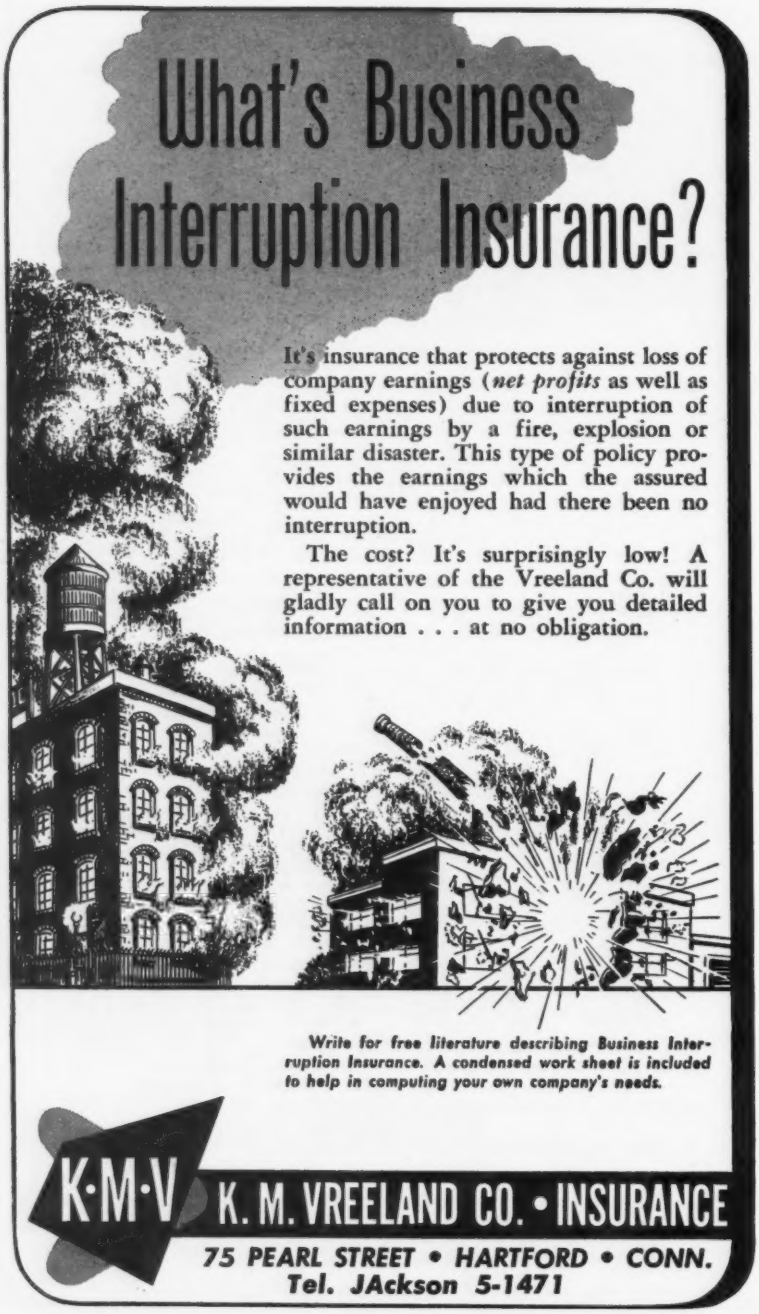
Nevertheless, the employer and employee delegates from totalitarian countries were seated. The deciding factors seemed to be the apprehension of retaliation among those governments geographically near Russia, and, equally or more important, the deplorable fact that so many so-called free countries have nationalized so many industries their employer delegate might be from such a nationalized industry, which would make him hardly distinguishable from a Russian employer delegate.

With such a bloc of employer, employee and government delegates all controlled by the government, Russia can practically control the I.L.O. conventions. The tripartite nature of the assembly is destroyed. Real progress in its primary objective of endeavoring to raise living standards of employees all over the world is lost to the I.L.O. It degenerates into another propaganda agency for Communism.

The question then arises as to what the United States should do about this situation. It has been suggested that the constitution of the I.L.O. be modified and reinforced through further clarification of the fundamental objectives and to provide that no member could belong unless he truly represented free workers and free employers. With Russia already a member and with so many industries nationalized in other countries, it appears doubtful that such an amendment could be enacted. The other thought is that the United States and other free countries might withdraw. Whatever the decision it calls for very serious consideration.

Another feature of the I.L.O. program which the Russians appear ready and willing to take over is the program wherein the I.L.O. sends men skilled in vocational guidance, production skills, agricultural know-how and so forth to under-developed countries to help them increase productivity and lay economic foundations which, when developed, will enable such countries to improve wage and labor standards. These experts are given a briefing in Geneva before going out into the field which is designed to give them "a more international outlook" and to be a better missionary for the I.L.O. ideas. With Communists in control of the I.L.O. these briefings are likely to take a different form. Although the I.L.O. has previously had some difficulty in obtaining sufficient experts for this technical assistance program, Russia has now offered to supply the organization with as many experts as it can use. The comment has been made that a more ingenious method of Communist infiltration under such respectable sponsorship can hardly be imagined, to say nothing of the fact that the United States pays 25½ per cent of the cost.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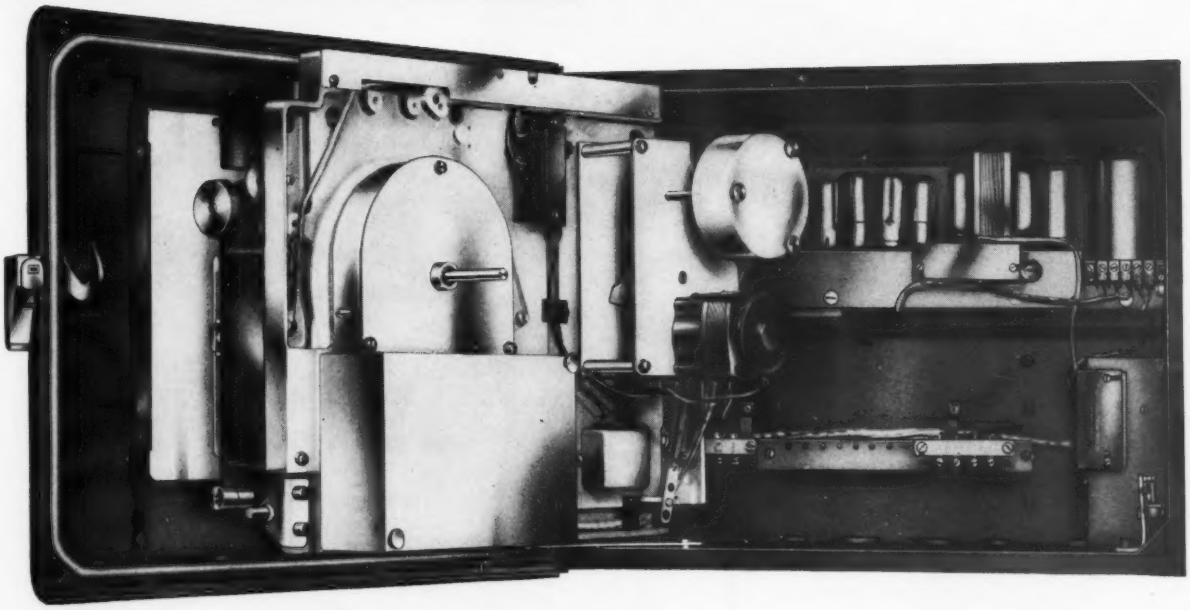

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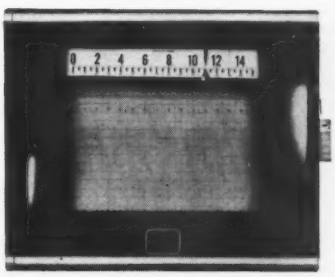

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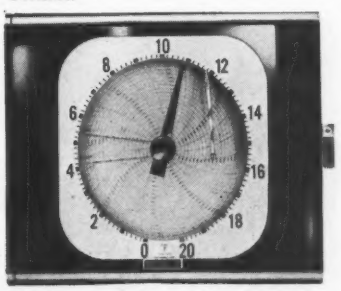

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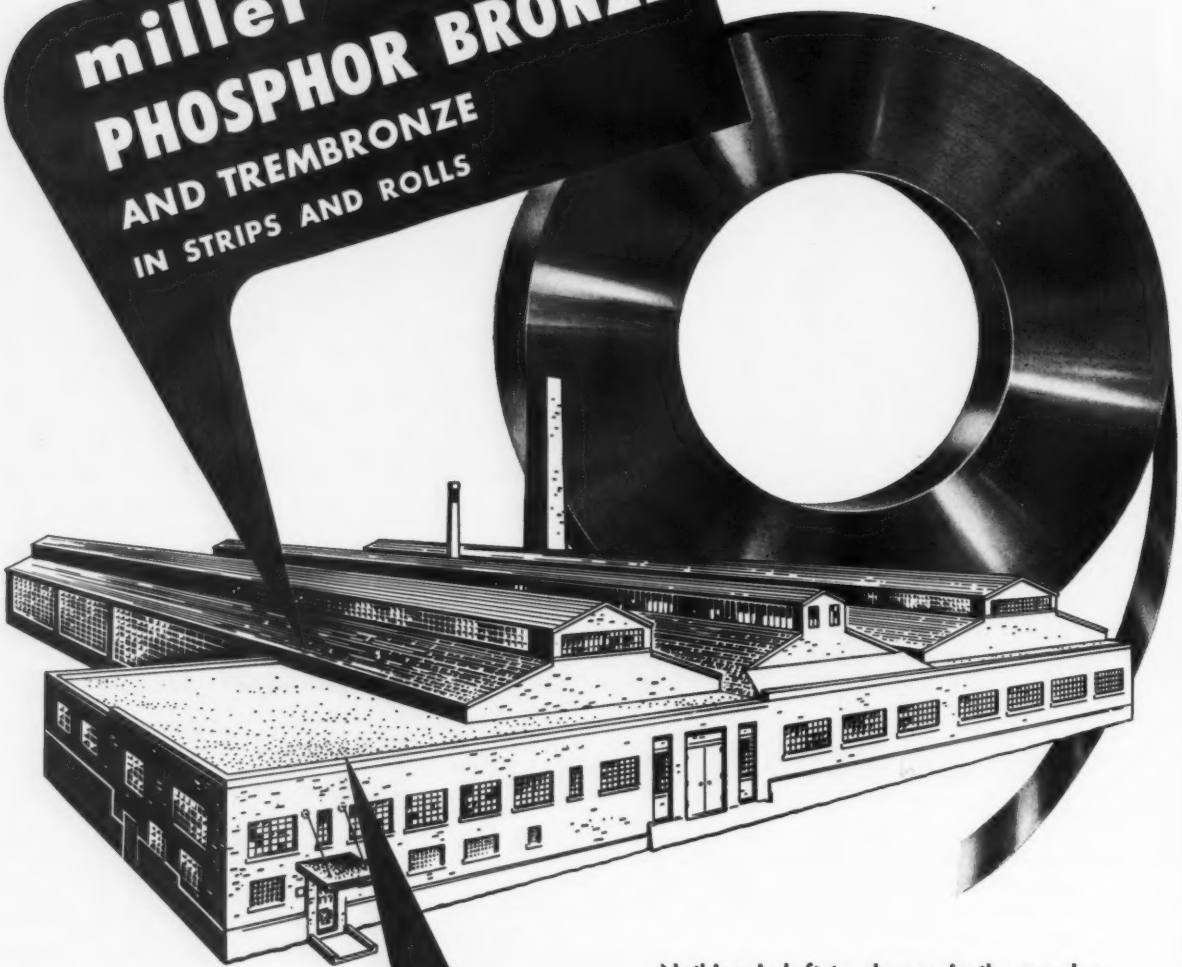

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The Factor of Inefficiency as Just Cause for Discharge

A. D. JOSEPH EMERZIAN

Assistant Professor of Industrial Administration

THE purpose of this study is to examine the meaning and influence of inefficiency as a factor in discharge cases under "just cause" contract provisions. This examination is restricted to the arbitration cases which have been processed by the Connecticut State Board of Mediation and Arbitration. The concept of inefficiency is both explained and defined in terms of absenteeism, accidents, physical disability and production. Obviously, this definition is a function of the nature and frequency of discharge cases which have been handled by the Board.

Absenteeism

Absences must be accounted for and valid reasons proposed before these absences are excused. It appears that the Board places the burden of proof upon the union to justify absences, and in all the cases examined, such justification was made in the face of poor absenteeism experience and records of warnings relating thereto.

Sickness is considered a justifiable reason for absence. However, if a firm discharges a person, without any knowledge of illness, it is not acting in poor faith; and whereas such discharge is not for proper cause, the firm is not held responsible for back pay from the date of discharge to the arbitration hearing date, because no certification of illness was presented as is customarily required.[1] It is important that absences be reported reasonably soon, although the method of reporting appears unimportant to the Board. Thus, where a generally unsatisfactory employee with a record of warnings did not report for work and the company received no notification of his illness until it questioned his brother, the Board reasoned that " . . . it does not matter whether the absentee's brother or the company spoke first about the matter, for in any event, it is clear that the report was made shortly after he was due to report for work."[2]

An absence to serve a jail sentence was not considered a justifiable reason.[3] This discharge was not based upon the jail sentence, but rather upon the absence from work for an extended period of time. Absences due to physical inability to perform a job does not constitute an acceptable excuse. In one case, the Board was of the opinion that if the work was too heavy " . . . this would be a reason why he might have been discharged since the work had to be done, and if he couldn't do it, someone else had to be hired to do the job in his place."[4] Injuries received on the job

[1] Brass Goods Manufacturing Company and Local 24411, Brass Workers Federal Labor Union, A.F.L. (May 25, 1950).

[2] Ford Brothers and Local 443, International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers, A.F.L. (July 2, 1947).

[3] Jenkins Brothers and Local 623, International Union of Mine, Mill and Smelter Workers of America, C.I.O. (June 1, 1949).

[4] American Brass Company and Local 251, International Union of Mine, Mill and Smelter Workers of America, C.I.O. (January 3, 1945).

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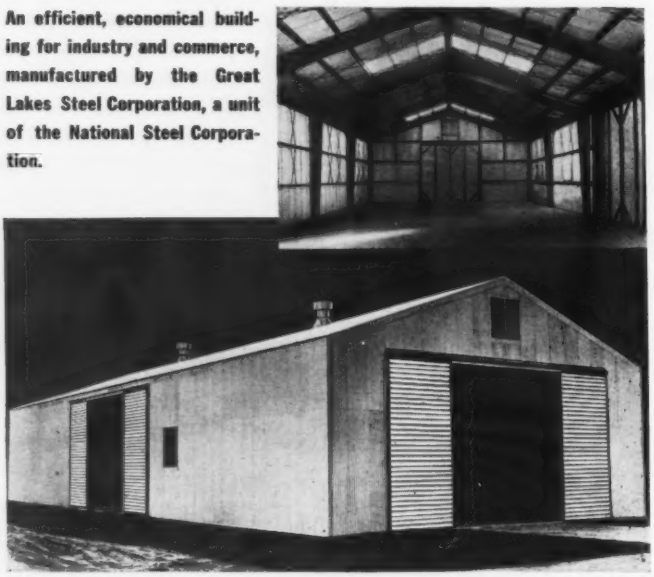

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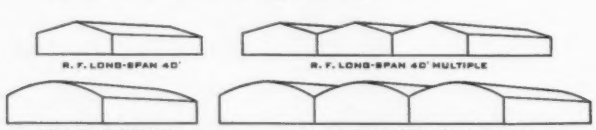

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have been rejected as a valid excuse for absences, if the employee's absenteeism record prior to the accident was poor.[5] Also where excessive absenteeism is present, and many absences can be attributed to illness, but many more are unexplained, the Board does not condone such unexplained absences which appear with such " . . . regularly which can hardly be attributed to coincidence."[6]

Accidents

A poor accident record as measured by the average number of accidents per year and evaluated by the average experience in the industry constitutes just cause for discharge. Thus, an accident experience of one per year on the average as contrasted with one per five or six years on the average for the industry was considered sufficiently poor to warrant discharge.[7] Also a record of three accidents during one year, in all of which the driver was at fault, in addition to four accidents in five years prior to this, constituted sufficient carelessness to justify a disciplinary demotion.[8] With only one accident, there must be clear evidence of gross negligence in order to sustain a discharge, however, some evidence of negligence is sufficient to warrant disciplinary action in the form of reinstatement without back pay.[9]

Physical Disability

Where the disability is not a liability of the company and the employee cannot perform satisfactorily in the job for which he was hired after a fair trial, such discharge is with just cause.[10] However, if the disability is connected with his employment, the firm has the obligation to place the employee upon jobs which are capable of being performed with such a disability if such jobs are available.[11] Also, where the

[5] American Crucible Company and Local 463, Playthings, Novelty, Jewelry Workers of America, C.I.O. (April 4, 1945).

[6] Connecticut Power Company and Local 468, International Brotherhood of Electrical Workers (January 10, 1952).

[7] Continental Baking Company and Local 559, International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers, A.F.L. (August 25, 1950).

[8] Connecticut Power Company and Local 468, International Brotherhood of Electrical Workers (February 26, 1952).

[9] Bassetti and Lawson and Local 443, International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers, A.F.L. (May 6, 1952).

[10] William Schollhorn Company and Local 461, Playthings, Jewelry and Novelty Workers of America, C.I.O. (October 20, 1947).

[11] American Brass Company and Local 251, Waterbury Brass Workers Union (August 14, 1945).

continued employment of an employee constitutes a safety hazard to himself and to his fellow workers, discharge is for just cause.[12] And where an employee is afflicted with a communicable disease, such discharge is just.[13]

Failure to Meet Production Standards

A discharge is for just cause if the production records indicate a performance which is " . . . radically inferior to what others are doing or really could do."[14] The Board compares the average performance of those discharged with the average performance of other operators for the same operation. The time period for comparison in one large case was the last ten days before discharge.[15] If the standard (100%) is attainable, as determined by the performance records of those not discharged, the Board appears to consider any performance below 75% of standard as constituting a sufficiently inferior productivity level to justify discharge.[16]

Summary

It appears that excessive, unexplained, or inexcusable absenteeism is just cause for discharge. Illness is one justifiable reason for absence. An accident experience considerably poorer than the average experience for an industry is considered reason for discharge. Where physical disability prevents satisfactory job performance, discharge is just if no jobs exist which can be satisfactorily performed. Failure to achieve a productivity level of 75 per cent on jobs on which standard (100%) is attainable, as determined by production records, is just cause for discharge.

Predictions based upon these generalizations are subject to some degree of unreliability because: (1) the sample of similar cases studied was reasonably small; (2) facts almost invariably provide the basis for decision in discharge cases and it is difficult to obtain two cases with the same set of facts; and (3) even if the facts were identical, there is no assurance that the arbitrator's decision will be the same.

[12] PM Industries and Local 226, United Gas, Coke and Chemical Workers, C.I.O. (November 24, 1952).

[13] Marlin Rockwell Corporation and Local 197, United Automobile Workers, C.I.O. (September 5, 1950).

[14] Pratt, Read and Company and Local 104, United Furniture Workers of America, C.I.O. September 10, 1948).

[15] *Ibid;* this case involves 16 discharged persons.

[16] *Ibid;* Torrington Company and Local 645, Metal Products Workers Union, P.M.C., I.U.M.S.W.A., C.I.O. (December 15, 1949).

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THE JULY index of general business activity in Connecticut fell off to an estimated 14% above normal, thereby offsetting the gains of the past three months and returning the index to the level which obtained in March of this year. Heavy vacation closings among industrial plants were largely responsible for the current lull in activity. All five components of the general index experienced decreases in July; manhours worked and freight shipments dropped noticeably while employment, construction and cotton mill activity declined moderately. An estimate of the United States index of industrial activity for July places it at about 3% above normal, down one point from the preceding month. The decrease was due chiefly to lower production of steel and the curtailment in lumber production caused by a strike on the west coast. On the other hand, industrial consumption of electric power rose to a record high during July. The National index is now sixteen percentage points lower than a year ago, but in the last six months has shown considerable stability, fluctuating less than one and one-half points.

The index of Connecticut factory employment declined one percentage point to 13% above normal in July. At this time last year the indicator was fifteen points above its current position and since then has moved slowly but steadily downward, decreasing at least a fraction of a point from one month to the next. The table below, based on Connecticut Department of Labor figures, shows actual and percentage changes which have occurred since July 1953 in manufacturing employment in Connecticut as a whole and in the larger labor market areas of the State:

	Number of Manufacturing Employees		
Area	July, 1954	July, 1953	% Change
State	401,100	454,700	—11.8
Bridgeport	65,500	73,600	—11.0
Hartford	75,200	78,300	—4.0
New Britain	27,000	29,500	—8.5
New Haven	45,700	49,600	—7.9
Waterbury	40,600	47,300	—14.3

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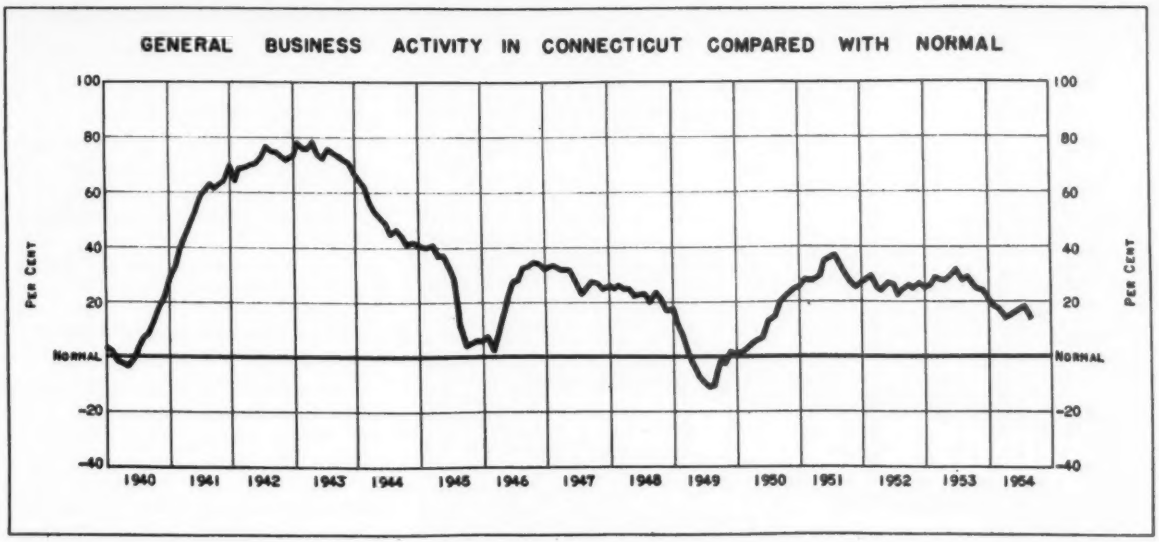
The table shows that among the principal labor market areas in the State Waterbury has been affected most noticeably in the last year by the slackening in business activity while Hartford, reflecting the continuing high rate of aircraft production, has been influenced least. The relatively high percent change for the State indicates that some of the smaller areas, not shown separately in the table, have experienced substantial decreases in employment. Non-manufacturing employment, however, has grown slightly in the State as a whole, increasing 3.1% from 426,700 last July to 440,100 at the present time. All of the labor market areas listed in the table recorded slight increases in non-manufacturing employment during the past year.

The index of manhours worked in Connecticut factories is estimated at 13% above normal for the month of July, approximately four percentage points below the preceding month. In July 1953 when the slackening in business commenced, this indicator was about twenty-three points above its current standing from which point it has moved irregularly downward, dropping most sharply in March of this year. Figures published by the United States and Connecticut Departments of Labor, reveal that weekly earnings and hours have declined from 1953 levels in both Connecticut and the Nation. However, in recent months this downward trend appears to have given way to a general leveling off. In the early months of 1954 weekly earnings and hours in Connecticut decreased more than in the United States as a whole, the result being that although the State remains ahead of the Country in both these items the margin has been reduced. Average earnings per week in Connecticut were $72.00 in July compared with $73.57 a year ago. Comparable figures for the Nation as a whole were $70.92 this month vs. $71.33 for July 1953. The current average factory work week in Connecticut at 40.0 hours has decreased from the 41.8 recorded at this time last year. Corresponding figures for the United States were 39.4 hours in July 1954 against 40.3 last year. Although average weekly earnings declined somewhat during the past year as a result of the reduction in the length of the work week the loss was partially offset by the fact that basic hourly earnings continued to increase moderately, in Connecticut from $1.69 to $1.75 and in the Nation from $1.72 to $1.76.

According to a preliminary estimate,



the index of Connecticut construction activity fell off eight percentage points in July to 141% above normal. This loss was the first in the last eight months, a period during which the construction indicator climbed eighty-two points to the record level of +149% in June. In the first six months of this year contracts were awarded for the construction of 12,894,000 residential and 5,186,000 non-residential square feet of floor space. For the like period of 1953 residential awards were 10,113,000 and non-residential awards 3,446,000 square feet.

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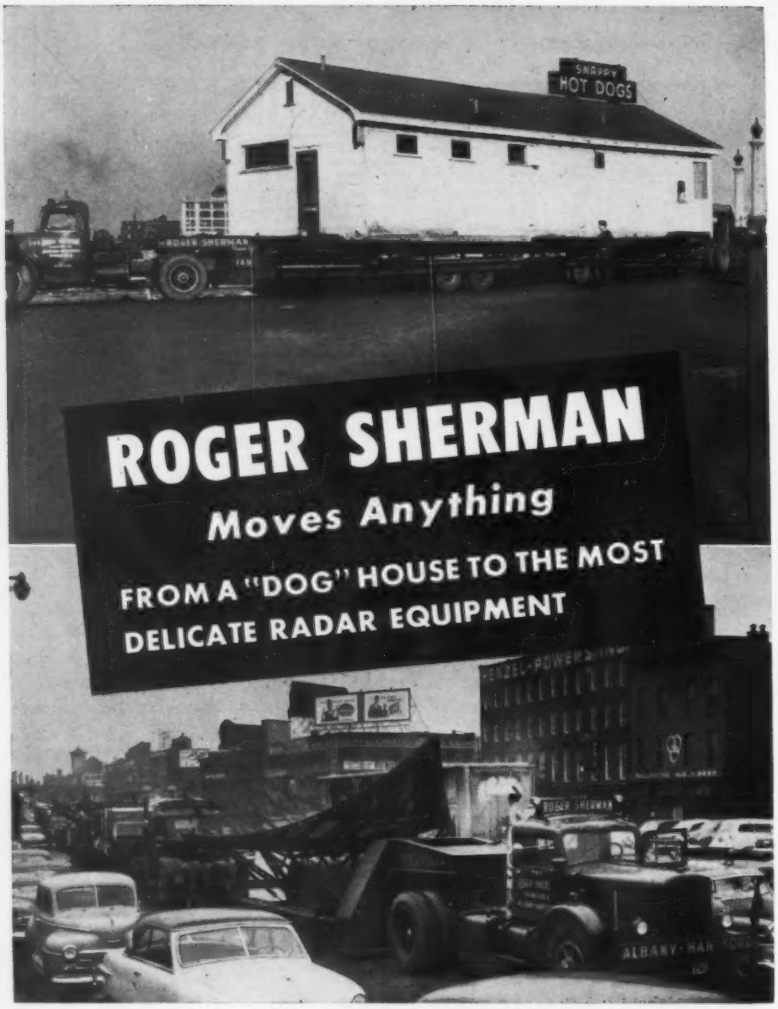

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The Henry G. Thompson Company

(Continued from page 8)

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Pioneering at Thompson does not end with products. It extends to policies as well. A recent example of the company's far-sighted thinking was the establishment of scholarships in the newly organized Industrial Distribution course at Clarkson College of Technology, Potsdam, N. Y. By establishing such assistance, The Henry G. Thompson & Son Company became the nation's first manufacturer to so support a training program for industrial distribution personnel.

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Since all MILFORD products reach industrial consumers solely through distributors, the company's top-management team of President D. W. Northup, Vice President in Charge of Sales A. W. Tucker, Secretary and Treasurer D. C. Smyth, and Assistant Treasurer J. T. Barrett has constantly sought to build stronger and more effective relationships with its distributors. As Mr. Tucker states, "The efficient and economical distribution of industrial supplies is essential to the American economy. It has become vastly more technical, and the need for thoroughly trained future executives in the Industry, as well as engineer-salesmen, is becoming more apparent each year."

Today, because of Henry Graham Thompson's sound policies, the manufacture of hack saw and band saw blades has become almost an exact science, MILFORD Blades have gained a worldwide reputation for superior performance and dependability, and the Company has grown to be a leader in its field. Today, because the men who now guide the destiny of this 75-year-old Connecticut firm are dedicated to continuing Mr. Thompson's forward-looking policies, the reputation of MILFORD products appears destined to grow in stature, thus maintaining the Company's present position of leadership in the field.

ACCOUNTING HINTS

Contributed by the Hartford Chapter National Association of Cost Accountants to stimulate the use of better accounting techniques in industry.

THE PRINCIPLES OF COST ACCOUNTING

REGARDLESS of the intricacies of many modern cost accounting systems, the basic principles of cost accounting remain unchanged. It is, therefore, well to pause occasionally and refresh not only ourselves, but also all employees concerned with the fundamental principles and purposes of our cost system.

Cost accounting has a two-fold purpose:

1. To determine the cost of manufacturing (as such it is part of general accounting).
2. To ascertain accurately each and every cost involved in the production of any article.

Cost accounting is a distinct and most important field of accounting practice. Accurate knowledge of every cost inherent in every unit of merchandise produced is indispensable for cost control, for cost reduction, for factory planning, for production planning, for compliance with government regulations, in fact for every management function in the field of manufacturing.

Cost accounting procedure should be as simple as possible. It should result in clear statements of costs, statements which lend themselves to easy and complete analysis.

Every manufacturing concern will, of course, employ the type of cost accounting which is best suited for its needs. Basically, there are two types of manufacturing plants:

1. Factories where products are made in distinct units or lots such as assembling industries, metal working plants, textile plants, etc. In most factories of this type, every lot is identified by a production order. This production order follows the product through all production operations, and labor, material and overhead costs are charged to each order as it proceeds from raw material to finished product.
2. Factories where raw materials pass through a series of processes until the product is finished, such as feed mills, rubber mills or chemical products plants. Factories of this kind usually employ the process cost system. Units (pounds, tons, barrels) as part of a mass, are costed by production processes.

The basic accounting principles, however, are the same for both types of manufacturing concern.

Factory cost accounting is made up of three elements:

1. Material Cost.
2. Direct Labor Cost.
3. Factory Overhead.

Material Cost represents the value of materials actually entering into and forming part of the finished product.

Direct Labor Cost is represented by the cost of labor applied directly on the product in the process of manufacture.

Factory Overhead are expenditures which are necessary but auxiliary to the materials going directly into the product and the labor applied in processing these materials. It includes expenditures for insurance, taxes, light, heat, power, factory repairs, machinery repairs, indirect labor, factory supplies and depreciation of fixed assets which are involved in the manufacturing processes.

In order to have a cost accounting system operate efficiently, production operations must be well organized in

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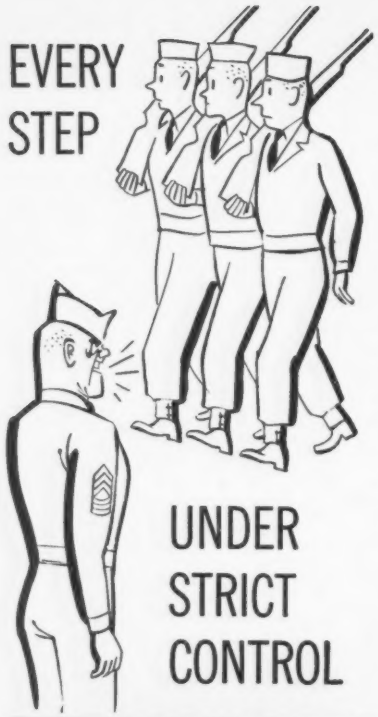

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separate departments. This makes it possible to charge most expense items directly to the products concerned and to calculate fairly accurate departmental and factory overhead rates. Overhead expenses such as steam, light, insurance, etc., are distributed by means of these overhead rates, generally on the basis of direct labor costs or direct labor hours.

Standard costs have become an almost indispensable part of any cost accounting system in recent years. Originally standard costs were used as fixed standards against which actual costs could be compared. More and more, however, cost accountants are adopting "true costs" as standard costs. By "true costs" they mean costs as they ought to be under the best possible operating conditions. In this way, actual performance can be compared with and checked against high efficiency performance.

Standard costs are, of course, adjusted periodically to conform with changed materials or production costs. This is usually done once a year.

The best cost accounting system is of little value unless it is used as a guide for greater production efficiency. Cost figures must be assembled as quickly as possible and made available to management in form of comparative cost reports. These cost reports may be illustrated by graphs and charts, showing cost developments from week to week or month to month or year to year. There is almost no limit to the variety of ways in which different types of cost can be presented for easy and effective analysis. Many factories have found it profitable to place cost charts in foremen's offices, and even on workers' bulletin boards, showing actual production performance and cost as against standard performance and cost from week to week.

The effectiveness of any cost accounting system depends on the men and women who are engaged to make it work. They must co-operate in all phases of their work and they must have the full co-operation of all personnel engaged in cost assembling, especially all supervisors, foremen and superintendents of the production departments. They must know the system they operate and the purposes which it serves. A cost accountant should not only know what it costs to produce a certain product; he should also know why it costs as much as it does. He should ever be in search for ways of lowering cost.

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INDUSTRIAL DEVELOPMENT

By L. M. BINGHAM

Secretary

Connecticut's New Credit Facility

THE Connecticut Credit Development Corporation opened its facilities for business in December 1953 after some two years of intensive promotional activity on the part of Paul V. Hayden, vice president of the Connecticut Light & Power Co. and his Area Development staff.

The pattern for the corporation was set in Maine in 1949 with the establishment of the first development credit corporation in the United States. Two years later New Hampshire established a credit corporation along similar lines.

After a close study of these established credit development corporations tentative enabling legislation was drafted. Numerous exploratory meetings were held with the Connecticut Bankers Association and representatives of key credit institutions including insurance companies, the savings banks and savings and loan associations, some of which were attended by representatives of the State Chamber of Commerce, the Manufacturers Association of Connecticut and the Connecticut Development Commission. Between meetings the legislative proposal was refined in the light of suggestions made until a final proposal was agreed upon by all interested, except Savings and Loan Associations, who felt it unwise for their member banks to participate in loans with considerable more risk than they had been accustomed to make over the years.

The enabling act permitting commercial banks and insurance companies to participate in lending up to 2% of their surplus was passed by the Connecticut General Assembly June 18, 1953. However, the completion of details of organization required several months of preparation and a major effort to enlist the minimum number of banks, as well as to obtain the minimum stock subscription of $50,000 required before the Connecticut Credit Development Corporation could open its doors for business. Although Connecticut utility companies were among the principal subscribers, participation was fairly broad, including industrial, commercial and individual purchasers of stock. The Manufacturers Association of Connecticut cooperated in the sale of stock by explaining in a bulletin to members the worthwhile assistance that the Credit Development Corporation could render to industries in the state who needed financial help

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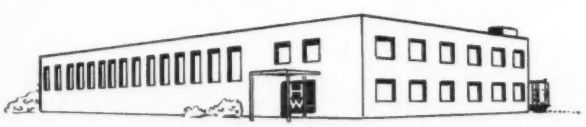

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unavailable through normal credit channels. Actual sale of the stock, however, was conducted by the Corporation.

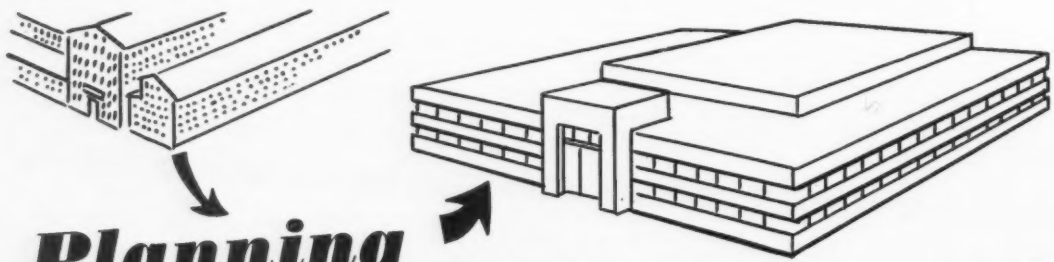
History to September 1, 1954

In an "Interim Report to Stockholders" covering its activity from the beginning until July 1, Paul V. Hayden, president, reported 54 stockholders with combined holdings of 678 shares or a total of $67,800 and a combined loan commitment by 23 member banks of $1,214,000. In this period over a hundred loan inquiries were received resulting in forty-five loan applications of which five were approved and loans disbursed in the amount of $209,000. In addition three applications made to the credit corporation in the amount of $150,000 were subsequently satisfied by Connecticut banks. The fact that these loans were made by Connecticut banks after approval by the Development Credit Corporation, which normally accepts applications only from companies who have been refused long-term credit by banks, would appear to prove that the existence of the credit corporation serves as a stimulus to expanded direct loaning by banks.

These five loans were made to companies as follows: A company in Fairfield County for construction of a plant addition and purchase of equipment; one in Eastern Connecticut for working capital; one in Waterbury for working capital; one in New Britain for working capital; and one in Litchfield County for working capital and refinancing of mortgages held by individuals. All loans were made to manufacturers for periods ranging from five to ten years at a 6% rate of interest on the unpaid balance with a 1% service charge on the gross loan.

Between July 1 and September 1 an additional loan of $10,000 has been made, raising total loans granted to $219,000 and an additional block of $15,000 of stock made to a large public utility, making the total stock outstanding 828 shares or a total of $82,800 paid in for capital stock of the corporation. With the sale of this $15,000 block of stock the lending limit of the corporation has been increased to $828,000, or ten times the amount of capital stock as provided in the charter. Inasmuch as the loan commitment of the 23 member banks now stands at $1,214,000, the loan limit of the corporation could be increased to this amount if an additional $38,600 of capital stock was sold, making a total of $121,400 of paid in capital stock.

Thus far the corporation is being operated through the voluntary services of officers of member banks and the Connecticut Light & Power Co., with the latter providing office space, clerical staff and management at its headquarters office building off the Wilbur Cross Parkway in Berlin, Conn. Robert P. Lee, Area Development Manager of the Connecticut Light & Power Co., will continue to act as manager until loans have reached a total of $500,000, when it is contemplated that a permanent manager will be employed and an office established at some central point in Connecticut. Until a permanent office is established, all applications for credit will be received by Mr. Lee, or a member of his Area Development staff at the Connecticut Light & Power Company general offices. After receipt of applications they are processed through sub-committees of volunteer bank credit officers before presentation to the Executive Committee of the Board of Directors for action.



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SPOTLIGHT ON THE FUTURE*

By R. C. SWANTON
Director of Purchases,
Winchester Repeating Arms Company,
Division of Olin Industries, Inc.

General Business Conditions

THE favorable points are brighter in the industrial business survey by Purchasing Agents for September. Again, there is a sharp reversal of the recessionary trend of a year ago and a step-up in September over August. New orders and production increases outbalanced decreases 3 to 1 in the reports, while the order improvement continues to be better than production. Prices show more strength and stability. Inventories are lower, with a strong trend to stabilize. Employment is up, with good prospects for further increase in October. Buying policy remains conservative—60 days and under—with a further slight extension of future coverage.

To the special question on home construction, the replies from a hundred localities indicate a continued strong market. Very few areas show a decline in operations. Generally, the lower priced new homes are selling fast. The medium and higher cost homes are moving well, though buyers have become more selective. Old houses are slow and declining in price.

Reviewing the statistics and the comments in the September industrial Purchasing Agents' survey, it is apparent that a normal seasonal pickup is in progress and may continue to improve over the balance of the year. No quick spurt is expected, but a gradual, steady increase in activity in a highly competitive buyers' market.

Commodity Prices

Strength and stability mark the industrial price structure in September. While the August trend to advance has abated somewhat, the number reporting decreases is the lowest since March, 1951. Fabricated items of steel, aluminum, lead and zinc are beginning to reflect the higher prices of the base materials. Keen competition is retarding a general upward movement.

Inventories

Industrial inventories declined again and at a slower pace than recorded last month. The current trend is to stabilize, with a slight move to increase, caused by improved production demands and short-time delivery required by customers. Stocks are generally in balance and most materials are readily avilable.

Employment

Industrial employment is up. 24%, the highest number since March, 1953, report additions to pay rolls, while the lowest number since September, 1953, record lower employment, some of this due to temporary summer help returning to school. Manufacturers supplying automotive parts are optimistic for an upswing in October as producers are making commitments and releasing schedules. Continued high home building and other construction are expected to maintain substantial employment in these fields.

Buying Policy

The slight stretch-out in commitment policy reported last month is extended a bit in September. Growing confidence in prices and improved production schedules are conducive to longer range planning. The predominant procurement policy, however, remains in the hand-to-mouth to 60-day bracket.

Specific Commodity Changes

More increased than decreased prices are again reported this month, sparked by steel, aluminum, lead, zinc and rubber.

On the up side were: Aluminum parts, bearings, brass and bronze ingots, burlap, some copper alloys, grains, gasoline, glycols, pole line hardware, lead, lumber, mercury, fuel oil, pipe, refractories, rubber and rubber goods, steel products, steel scrap, tin plate, zinc.

Reported down: Stearic acid, autos, ferromanganese, shortening, cocoa, coffee, sugar, soybean oil, linseed.

Hard to get: Copper, lumber (strikes), nickel, selenium.

Canada

Canadian Purchasing Agents report a brisk pickup in September over August, with orders and production about in balance and at a slightly higher rate of increase than in the United States.

(Continued on page 72)

* *Composite opinion of the purchasing agents who are members of the N.A.P.A. Business Survey Committee, whose Chairman is Robert C. Swanton.*

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EDITOR'S NOTE: This department, giving a partial list of peace-time products manufactured in Connecticut by company, seeks to facilitate contacts between prospective purchasers in domestic or foreign markets and producers. It includes only those listings purchased by Connecticut manufacturers. Interested buyers may secure further information by writing this department. Connecticut manufacturers desiring to list their products in this department should write the Editor for listing rates.

(Advertisement)

Accounting Forms
Baker-Goodyear Co The — New Haven

Accounting Machines
Underwood Corporation — Bridgeport

Adding Machines
Underwood Corporation — Bridgeport

Advertising Specialties
H C Cook Co The 32 Beaver St — Ansonia
Halco Co — New Haven

Air Compressors
Spencer Turbine Co The — Hartford

Air Conditioning
Norwalk Airconditioning Corp The (forced air heating units oil fired) — South Norwalk

Air Impellers
The Torrington Manufacturing Co — Torrington

Aircraft
Sikorsky Aircraft Division United Aircraft Corporation (helicopters) — Bridgeport

Aircraft Accessories
Chandler Evans Div Niles-Bement-Pond Co (Piston and Jet Engine Accessories—Carburetors, Fuel Controls, Afterburner Regulators, Pumps, Servomechanisms and Protek Plugs) — West Hartford
Gabb Special Products Div E Horton & Son Company (filler caps—pressure fuel servicing systems) — Windsor Locks
Hamilton Standard Div United Aircraft Corp (propellors and other aircraft equipment) — Windsor Locks
Manning Maxwell & Moore Inc (aircraft pressure switches and jet engine afterburner control systems) — Stratford
Russell Manufacturing Company The (CAA approved safety belts; webbing and hardware for safety belts; shock rings and shock cord; ring and cord hardware; webbing for all aircraft applications) — Middletown

Aircraft Instruments
Gorn Electric Company Inc — Stamford

Aircraft—Repair & Overhaul
Airport Department Pratt & Whitney Aircraft Division — Rentschler Field East Hartford

Aircraft Test Equipment
United Manufacturing Co Division of The W L Maxson Corp — Hamden

Air Ducts
Wiremold Co The (Retractable) — Hartford

Air Heaters—Direct Fired
Peabody Engineering Corporation — Stamford

Aluminum Bronze Castings
Knapp Foundry Company Inc — Guilford

Aluminum Castings
Consolidated Industries Inc — West Cheshire
Eastern Malleable Iron Company The — Naugatuck
Newton-New Haven Co 688 Third Avenue — West Haven
Charles Parker Company The — Meriden
Stamford Casting Company Inc (Aluminum, Magnesium and Bronze) — Stamford

Aluminum Forgings
Consolidated Industries Inc — West Cheshire
Scovill Manufacturing Company — Waterbury 91

Aluminum Ingots
Lapides Metals Corp — New Haven

Aluminum Lasts
United States Rubber Company Shoe Hardware Division — Waterbury

Aluminum Paint
Baer Brothers — Stamford

Aluminum Paste
Baer Brothers — Stamford

Aluminum—Sheets & Coils
United Smelting & Aluminum Co Inc — New Haven

Ammunition
Remington Arms Co Inc and Peters Cartridge Div — Bridgeport
Winchester Repeating Arms Company Division Olin Industries Inc — New Haven

Anodizing
Conn Metal Finishing Co — Hamden

Anodizing Equipment
Conn Metalcraft Inc — New Haven

Artificial Leather
Permatex Fabrics Corp The — Jewett City

Asbestos
Auburn Manufacturing Company The (gaskets, packings, wicks) — Middletown

Asbestos & Rubber Packing
Colt's Manufacturing Company — Hartford

Asarcon Bronze
Knapp Foundry Company Inc (bushing & bearing stock) — Guilford

Assemblies—Small
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Greist Manufacturing Co The — New Haven
Humason Mfg Co The — Forestville
J H Sessions & Son — Bristol

Auto Cable Housing
Wiremold Company The — Hartford

Automatic Control Instruments
Bristol Co The (temperature, pressure, flow, humidity, time) — Waterbury

Automobile Accessories
Kilbourn-Sauer Company (lights and other accessories) — Fairfield

Automotive Bodies
Metropolitan Body Company — Bridgeport

Automotive Parts
Eis Manufacturing Co (Hydraulic and Mechanical) — Middletown
Raybestos Division of Raybestos-Manhattan Inc (Brake Lining, Lined Brake Shoes, Clutch Facings, Automatic Transmission Parts, Fan Belts, Radiator Hose and Miscellaneous Rubber) — Bridgeport

Automotive & Service Station Equipment
Scovill Manufacturing Company (Canned Oil Dispensers) — Waterbury 91

Automotive Tools
Eis Manufacturing Company — Middletown

Bags—Paper
American Paper Goods Company The — Kensington

Bakelite Moldings
Watertown Mfg Co The — Watertown

Balls
Abbott Ball Co The (steel bearing and burnishing) — Hartford
Hartford Steel Ball Co The (steel bearing and burnishing, brass, bronze, monel, stainless aluminum) — Hartford
Kilian Steel Ball Corp The — Hartford

Banbury Mixers
Farrel-Birmingham Company Inc — Ansonia

Barrels
Abbott Ball Co The (burnishing and tumbling) — Hartford
Hartford-Steel Ball Co The (tumbling) — Hartford

Barrels—Tumbling
Conn Metalcraft Inc — New Haven

Baskets—Wire
Rolock Inc — Fairfield

Bathroom Accessories
Autoyre Company The — Oakville
Charles Parker Co The — Meriden

Batteries
Bond Electric Corporation Division of Olin Industries Inc (flashlight, radio, hearing aid and others) — New Haven
Winchester Repeating Arms Co Division of Olin Industries Inc (flashlight, radio, hearing aid and others) — New Haven

Bearings
Fafnir Bearing Co (ball) — New Britain
Marlin-Rockwell Corporation — Plainville
New Departure Div of General Motors (ball) — Bristol
Norma-Hoffmann Bearings Corp (ball and roller) — Stamford

Bellows
Bridgeport Thermostat Company Inc (metallic) — Bridgeport

Bellows Assemblies
Bridgeport Thermostat Company Inc — Bridgeport

Bellows Shaft Seal Assemblies
Bridgeport Thermostat Company Inc — Bridgeport

Bells
Bevin Brothers Mfg Co. — East Hampton
Gong Bell Co The — East Hampton
N N Hill Brass Co The — East Hampton

Belt Fasteners
Saling Manufacturing Company (patented self-aligning) — Unionville

Belting
Hartford Belting Co — Hartford
Russell Mfg Co The — Middletown
Thames Belting Co The — Norwich

Bends—Pipe or Tube
National Pipe Bending Co The — 160 River St New Haven

Bicycle Coaster Brakes
New Departure Div General Motors Corp — Bristol

Bicycle Sundries
New Departure Div General Motors Corp — Bristol

Binders Board
Colonial Board Company — Manchester

Biological Products
Ernst Bischoff Company Inc — Ivoryton

Blacking Salts for Metals
Enthone Inc — New Haven
Mitchell-Bradford Chemical Co — Bridgeport

Blades
Capewell Manufacturing Company Metal Saw Division (hack saw and band saw) — Hartford

Blankets—Automatic
General Electric Company — Bridgeport

Blocks
Howard Company (cupola fire clay) — New Haven

Blower Fans
Colonial Blower Company — Plainville
Spencer Turbine Co The — Hartford

Blower Systems
Colonial Blower Company — Plainville
Ripley Co — Middletown

Blueprints and Photostats
Joseph Merritt & Co — Hartford

Boilers
Bigelow Co The — New Haven

Bolts and Nuts
Blake & Johnson Co The (nuts machine screw-bolts, stove) — Waterville
Clark Brothers Bolt Co — Millidale

Bonderizing
Clairglow Mfg Company — Portland (Advt.)

Bottle Openers
Scoville Mfg Co (steel, anodized aluminum) Waterbury

Box Board
Lydall & Foulds Paper Co The Manchester
National Folding Box Co Inc New Haven
Robertson Paper Box Co Montville
Gair Company Inc Robert Montville
New Haven Board and Carton Co The New Haven

Boxes
Clairglow Mfg Company (metal) Portland
Connecticut Container Corporation New Haven
Gair Company Inc Robert (corrugated and solid fibre shipping containers) Montville
Merriam Mfg Co (steel cash, bond, security, fitted tool and tackle boxes) Durham
Warner Bros Co The (Acetate, Paper, Acetate and Paper Combinations, Counter Display, Setup) Bridgeport

Boxes and Crates
City Lumber Co of Bridgeport Inc The Bridgeport
Wallingford Planing Mill Co Inc Yalesville

Boxes—Metal
Merriam Mfg Co (Bond and Security, Cash and Utility, Personal Files and Drawer Safes) Durham

Boxes—Paper—Folding
Atlantic Carton Corp Norwich
Bridgeport Paper Box Co Bridgeport
Carpenter-Hayes Paper Box Co Inc The East Hampton
Curtis & Sons Inc S Sandy Hook
Dowd Carton Co M S Groton
Folding Cartons Incorporated (paper, folding) Versailles
Gair Company Inc Robert Portland
H J Mills Inc Bristol
National Rolling Box Co Inc (paper folding) New Haven
New Haven Board and Carton Co The New Haven
Robertson Paper Box Co Montville
Warner Bros Co The Bridgeport

Boxes—Paper—Setup
Box Shop Inc The New Haven
Bridgeport Paper Box Co Bridgeport
Heminway Corporation The Waterbury
H J Mills Inc Bristol
Strouse Adler Company The New Haven
Warner Bros Co The Bridgeport

Brake Cables
Eis Manufacturing Co Middletown

Brake Linings
Raybestos Division of Raybestos-Manhattan Inc (Automotive and Industrial) Bridgeport
Russell Mfg Co The Middletown

Brake Service Parts
Eis Manufacturing Co Middletown

Brass & Bronze
American Brass Co The (sheet, wire, rods, tubes) Waterbury
Bridgeport Brass Company (sheet, rod, wire and tubing) Bridgeport
Bristol Brass Corp The (sheet, wire, rods) Bristol
Chase Brass & Copper Co Waterbury
Miller Company The (phosphor bronze and brass in sheets, strips, rolls) Meriden
Plume & Atwood Mfg Co The (sheet, wire, rod) Thomaston
Scovill Manufacturing Company Waterbury 91
Tinsheet Metals Co The (sheets and rolls) Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) New Haven

Brass & Bronze Ingot Metal
Plume & Atwood Mfg Co The Thomaston
Whipple and Choate Company The Bridgeport

Brass, Bronze, Aluminum Castings
Charles Parker Company The Meriden
Stamford Casting Company Inc Stamford
Victors Brass Foundry Inc Guilford

Brass Goods
American Brass Company The Waterbury
Plume & Atwood Mfg Co The (to order) Waterbury
Rostand Mfg Co The (Ecclesiastical Brass Wares) Milford
Scovill Manufacturing Company (to order) Waterbury 91
Western Brass Mills Division of Olin Industries Inc New Haven

Brass Mill Products
American Brass Company The Waterbury
Bridgeport Brass Co Bridgeport
Chase Brass & Copper Co Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury 91
Western Brass Mills Division of Olin Industries Inc New Haven

Brick-Building
Donnelly Brick Co The New Britain

Bricks—Fire
Howard Company New Haven
Mullite Refractories Co The Shelton

Bright Wire Goods
Sargent & Company (Screw Eyes, Screw Hooks, Cup Hooks, Hooks and Eyes, C H Hooks) New Haven

Broaching
Hartford Special Machinery Co The Hartford

Bronze & Aluminum Castings
Knapp Foundry Company Inc (rough or machined) Guilford

Bronze Powders
Baer Brothers Stamford

Brooms—Brushes
Fuller Brush Co The Hartford

Buckles
B Schwanda & Sons Staffordville
G E Prentice Mfg Co The Kensington
Hawie Mfg Co The Bridgeport
John M Russell Mfg Co Inc. Naugatuck
North & Judd Manufacturing Co New Britain
Patent Button Co The Waterbury
United States Rubber Company Shoe Hardware Division Waterbury

Buffing & Polishing Compositions
Apothecaries Hall Co Waterbury
Lea Mfg Co Waterbury

Buffing Wheels
Williamsville Buff Div The Bullard Clark Company Danielson

Burners
Plume & Atwood Mfg Co The (kerosene oil lighting) Waterbury

Burners—Automatic
Peabody Engineering Corporation Stamford

Burners—Coal and Oil
Peabody Engineering Corporation (Combined) Stamford

Burners—Gas
Peabody Engineering Corporation (Blast Furnace) Stamford

Burners—Gas and Oil
Peabody Engineering Corporation (Combined) Stamford

Burners—Refinery
Peabody Engineering Corporation (For Gas and Oil) Stamford

Burnishing
Abbott Ball Co The (Burnishing Barrells and Burnishing Media) Hartford

Burs
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Buttons
B Schwanda & Sons Staffordville
Frank Parizek Manufacturing Co The Putnam
Patent Button Co The Waterbury
Scovill Manufacturing Company (Uniform and Tack Fasteners) Waterbury 91
Waterbury Companies Inc (Uniform and Fancy Dress) Waterbury

Cabinets
Charles Parker Co The (medicine) Meriden

Cabinet Work
Hartford Builders Finish Co Hartford

Cable—Asbestos Insulated
Rockbestos Products Corp New Haven

Cable—BX Armored
General Electric Company Bridgeport

Cable—Nonmetallic Sheathed
General Electric Company Bridgeport

Cable—Service Entrance
General Electric Company Bridgeport

Cages
Andrew B Hendryx Co The (bird and animal) New Haven

Cams
American Cam Company Inc Hartford
Hartford Special Machinery Co The Hartford
Rowbottom Machine Company Inc Waterbury

Canvas Products
F B Skiff Inc Hartford

Capacitors
Electro Motive Mfg Co Inc The (mica & trimmer) Willimantic

Card Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Carpenter's Tools
Sargent & Company (Planes, Squares, Plumb Bobs, Bench Screws, Clamps and Saw Vices) New Haven

Carpet
B F Goodrich Sponge Products Division Shelton

Carpet Cushion
B F Goodrich Sponge Products Division Shelton

Carpets and Rugs
Bigelow-Sanford Carpet Co Thompsonville

Casters
Bassick Company The (Industrial and General) Bridgeport

Casters—Industrial
George P Clark Co Windsor Locks

Castings
Connecticut Foundry Co (grey iron) Rocky Hill
Connecticut Malleable Castings Co (malleable iron castings) New Haven
Consolidated Industries Inc West Cheshire
Charles Parker Company The (grey iron, brass, bronze, aluminum) Meriden
Eastern Malleable Iron Company The (malleable iron, metal and alloy) Naugatuck
Farrel-Birmingham Company Inc (Meehanite, Nodular, Iron, Steel) Ansonia
Gillette-Vibber The (grey iron, brass, bronze, aluminum, also Bronze Bushing Stocks) New London
Plainville Casting Company (gray, alloy and high tensile irons) Plainville
Malleable Iron Fittings Co (malleable iron and steel) Branford
McLagon Foundry Co (grey iron) New Haven
Meyer Iron and Brass Foundry Inc (grey iron) Shelton
Newton-New Haven Co (zinc and aluminum) 688 Third Ave West Haven
Philbrick-Booth & Spencer Inc (grey iron) Hartford
Producto Machine Company The Bridgeport
Scovill Manufacturing Company (Brass & Bronze) Waterbury 91
Stamford Casting Company Inc (Aluminum, Magnesium and Bronze) Stamford
Turner & Seymour Mfg Co The (gray iron, semi steel and alloy) Torrington
Union Mfg Co (grey iron & semi steel) New Britain
Waterbury Foundry Company The (highway & sash weights) Waterbury
Wilcox Crittenden & Co Inc (gray iron and brass) Middletown

Castings—Investment
Arwood Precision Casting Corp Groton

Castings—Permanent Mould
Charles Parker Company The Meriden

Cements—Refractory
Mullite Refractory Co The Shelton

Chain
John M. Russell Mfg Co Inc Naugatuck
Turner and Seymour Mfg Co The (weldless, sash, jack, safety, furnace, universal, lion and cable) Torrington

Chain—Power Transmission and Conveying
Whitney Chain Company Hartford

Chain—Welded and Weldless
Bridgeport Chain & Mfg Co Bridgeport

Chain—Bead
Auto-Swage Products Inc Shelton
Bead Chain Mfg Co The Bridgeport

Chairs
The Hitchcock Chair Company Riverton

(Advt.)

Chemical Manufacturing
Carwin Company The — North Haven

Chemicals
American Cyanamid Company — Waterbury
Apothecaries Hall Co — Waterbury
Carwin Company The — North Haven
Edcan Laboratories — South Norwalk
Macalaster Bicknell Company — New Haven
MacDermid Incorporated — Waterbury
Naugatuck Chemical Division United States Rubber Co — Naugatuck
New England Lime Company — Canaan
Pfizer & Co Inc Chas — Groton

Chemicals—Agriculture
Naugatuck Chemical Division United States Rubber Co (insecticides, fungicides, weed killers) — Naugatuck

Chemicals—Aromatic
Naugatuck Chemical Division United States Rubber Co — Naugatuck

Christmas Light Clips
Foursome Manufacturing Co — Bristol

Chromium Plating
Chromium Corp of America — Waterbury
Chromium Process Company The — Shelton
City Plating Works Inc — Bridgeport

Chucks
Cushman Chuck Co The — Hartford
Horton Chuck Div The E Horton & Son Company — Windsor Locks
Jacobs Manufacturing Co The — West Hartford
Union Manufacturing Company — New Britain

Chucks—Drill
Jacobs Manufacturing Co The — West Hartford

Chucks & Face Plate Jaws
Union Mfg Co — New Britain
Horton Chuck Div The E Horton & Son Company — Windsor Locks

Chucks—Power Operated
Cushman Chuck Co The — Hartford
Union Manufacturing Company — New Britain

Clay
Howard Company (Fire Howard "B" and High Temperature Dry) — New Haven

Cleaning Compounds
Enthone Inc (Industrial) — New Haven

Cleansing Compounds
MacDermid Incorporated — Waterbury

Clock Mechanisms
Lux Clock Mfg Co The — Waterbury

Clocks
E Ingraham Co The — Bristol
Seth Thomas Clocks — Thomaston
United States Time Corporation The — Waterbury

Clocks—Alarm
Lux Clock Mfg Co The — Waterbury

Clocks—Automatic Cooking
Lux Clock Mfg Co The — Waterbury

Clutches
Snow-Nabstedt Gear Corp The — New Haven

Clutch Facings
Raybestos Division of Raybestos-Manhattan Inc (Molded, Woven, Semi-metallic and Full-metallic) — Bridgeport
Russell Mfg Co The — Middletown

Coils
Dano Electric Company — Winsted

Coils—Electric
Bittermann Electric Company — Canaan

Coils—Pipe or Tube
National Pipe Bending Co The — 160 River St New Haven
Whitlock Manufacturing Co The — Hartford

Commercial Heat Treating
A F Holden Company The — 52 Richard St West Haven

Commercial Truck Bodies
Metropolitan Body Company — Bridgeport

Comparators
Pratt & Whitney Div Niles-Bement-Pond Co (Electro-limit and Air-O-Limit) — West Hartford

Compressors
Norwalk Company Inc (high pressure air and gas) — South Norwalk

Concrete Products
Plastricrete Corp — Hamden

Cones
Sonoco Products Co (Climax-Lowell Div) (Paper) — Mystic

Consulting Engineers
Stanley P Rockwell Co Inc The (Consulting) 296 Homestead Ave — Hartford

Continuous Mill Gages
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Contract Machining
Malleable Iron Fittings Company — Branford

Contract Manufacturers
Greist Mfg Co The (metal parts and assemblies) 503 Blake St — New Haven
Merriam Mfg Co (production runs—metal boxes and containers to specifications) — Durham
Plume & Atwood Mfg Co The (metal parts & assemblies) — Waterbury
Scovill Manufacturing Company (metal parts and assemblies) — Waterbury 91
J H Sessions & Son — Bristol

Controllers
Bristol Company The — Waterbury
Manning Maxwell & Moore Inc — Stratford

Controls—Remote
Panish Controls (Remote Controls for Marine & Aeronautic Applications) — Bridgeport

Conveyor Systems
Leeds Electric & Mfg Co The — East Haven
Production Equipment Co — Meriden

Copper
American Brass Corp The (sheet, wire, rods, tubes) — Waterbury
Bridgeport Brass Company (sheet, rod, wire and tubing) — Bridgeport
Bristol Brass Corp The (steel) — Bristol
Chase Brass & Copper Co (sheet, rod, wire tube) — Waterbury
Thinsheet Metals Co The (sheets and rolls) — Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) — New Haven

Copper Castings
Knapp Foundry Company Inc — Guilford

Copper Sheets
American Brass Company The — Waterbury
New Haven Copper Co The — Seymour

Copper Shingles
New Haven Copper Co The — Seymour

Copper Water Tube
American Brass Company The — Waterbury
Bridgeport Brass Co — Bridgeport

Cords—Asbestos
General Electric Company — Bridgeport

Cords—Braided
General Electric Company — Bridgeport

Cords—Heater
General Electric Company — Bridgeport

Cords—Portable
General Electric Company — Bridgeport

Cord Sets
Seeger-Williams Inc — Bridgeport

Cord Sets—Electric
General Electric Company — Bridgeport

Cork Cots
Sonoco Products Co (Climax-Lowell Div) — Mystic

Corrugated Box Manufacturers
Connecticut Container Corporation — New Haven

Corrugated Shipping Cases
Connecticut Container Corporation — New Haven
Connecticut Corrugated Box Div Robert Gair Co Inc — Portland
D L & D Container Corp 87 Shelton Ave — New Haven

Cosmetic Containers
Evelet Specialty Co The — Waterbury
Plume & Atwood Mfg Co The (metal) — Waterbury

Cosmetics
J B Williams Co The — Glastonbury

Cotton and Asbestos Wicking
Bland Burner Co The — Hartford

Cotton Yarn
Floyd Cranska Co The — Moosup

Counting Devices
Veeder-Root Inc — Hartford

Couplings—Self-Sealing
Sperry Products Inc — Danbury

Cranes and Conveyors
I-B Engineering Sales Co — New Haven

Crushers
Farrel-Birmingham Company Inc (Stone and Ore) — Ansonia

Cups—Paper
American Paper Goods Company The ("Puritan") — Kensington

Cushioning for Packaging
B F Goodrich Sponge Products Division — Shelton
Gilman Brothers Co The — Gilman

Cut Stone
Dextone Co The — New Haven

Cutters
Barnes Tool Company The (pipe cutters, hand) — New Haven
Mitrametric Co The (ground pinion) — Torrington
Pratt & Whitney Div Niles-Bement-Pond Co (Milling Cutters all types) — West Hartford

Decorative Plating and Polishing
City Plating Works Inc — Bridgeport

Deep Drawings
Stanley Pressed Metal — New Britain

Delayed Action Mechanism
M H Rhodes Inc — Hartford
R W Cramer Company Inc The — Centerbrook

Demineralizers
Crystal Research Laboratories — Hartford

Diamonds—Industrial
Diamond Tool and Die Works — Hartford

Dictating Machines
Dictaphone Corporation — Bridgeport
Gray Manufacturing Company The — Hartford
Soundscriber Corporation The — New Haven

Die Castings
Newton-New Haven Co Inc — New Haven

Die Casting Dies
ABA Tool & Die Co — Manchester
Parker Stamp Works Co The — Hartford
Weimann Bros Mfg Co The — Derby

Die Castings (Aluminum & Zinc)
Stewart Die Casting Div Stewart Warner Corp — Bridgeport

Die Heads—Self Opening
Eastern Machine Screw Corp The Truman & Barclay Sts — New Haven

Die Polishing Machinery
Hartford Special Machinery Co The — Hartford

Die Sets
Pratt & Whitney Div Niles-Bement-Pond Co (Precision) — West Hartford
Producto Machine Company The — Bridgeport
Union Mfg Co (precision, steel and semi-steel) — New Britain

Dies
Hoggson & Pettis Mfg Co The 141 Brewery St — New Haven
Mitrametric Co The (ground for gears) — Torrington
Parker Stamp Works Inc The (plastics and die castings) — Hartford
Pratt & Whitney Div Niles-Bement-Pond Co (Monocone and Ducone Dies) — West Hartford

Die Sinkers
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Dies and Die Sinking
Consolidated Industries — West Cheshire

Dish Drying Machines
Colt's Manufacturing Company — Hartford

Dish Washing Machines
Colt's Manufacturing Company — Hartford

Displays—Metal
Merriam Mfg Co (Contract Work to Individual Specifications) — Durham

(Advt.)

Door Closers
P & F Corbin Division The American Hardware Corp — New Britain
Sargent & Company — New Haven
Yale & Towne Mfg Co The — Stamford

Dowel Pins
Allen Manufacturing Co The — Hartford
Holo-Krome Screw Corp The — West Hartford

Drafting Accessories
Joseph Merritt & Co — Hartford

Drilling Machines
Pratt & Whitney Div Niles-Bement-Pond Co (Deep Hole) — West Hartford

Drilling and Tapping Machinery
Hartford Special Machinery Co The — Hartford

Drop Forgings
Atwater Mfg Co — Plantsville
Blakeslee Forging Company The — Plantsville
Capewell Mfg Company — Hartford
Consolidated Industries — West Cheshire
Wilcox Crittenden & Co Inc — Middletown

Druggists' Rubber Sundries
Seamless Rubber Company The — New Haven

Duplicating Machines—Automatic
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Electric Cables
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Clocks
Sessions Clock Co The (alarm, kitchen, occasional and office) — Forestville

Electric—Commutators & Segments
Cameron Elec Mfg Co The (rewinding motors) — Ansonia

Electric Cord Springs
Bristol Spring Manufacturing Co — Plainville

Electric Cords
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Eye Control
United Cinephone Corporation — Torrington

Electric Fixture Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestosinsulated) — New Haven

Electric Hand Irons
Winsted Hardware Mfg Co (trade mark "Durabilt") — Winsted

Electric Heating Elements
Hartford Element Co — Hartford

Electric Insulation
Case Brothers Inc — Manchester
Stevens Paper Mills Inc The — Windsor

Electric Lighting Fixtures
Fan-Craft Mfg Co (residential, church, post lanterns) — Plainville
Plume & Atwood Mfg Co The — Waterbury
Wasley Products Inc — Plainville

Electric Motor Controls
Arrow-Hart & Hegeman Electric Co The — Hartford

Electrical Outlet and Switch Boxes, and Covers
General Electric Company — Bridgeport

Electric Panel Boards
Federal Electric Products Co Inc — Hartford

Electric Safety Switches
Federal Electric Products Co Inc — Hartford

Electric Shavers
Schick Incorporated — Stamford

Electric Signs
Berger Sign Co — Hartford
United Advertising Corp — New Haven

Electric Switches
Arrow-Hart & Hegeman Electric Co The — Hartford
General Electric Company — Bridgeport

Electric Time Controls
R W Cramer Company Inc The — Centerbrook

Electric Timers
Sessions Clock Co The — Forestville

Electric Timing Motors
Sessions Clock Co The (small) — Forestville

Electric Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Wiring Devices
Arrow-Hart & Hegeman Electric Co The — Hartford
General Electric Company — Bridgeport

Electrical Circuit Breakers
Federal Electric Products Co Inc — Hartford

Electrical Conduit Fittings & Grounding Specialties
Gillette-Vibber Company The — New London

Electrical Control Apparatus
Federal Electric Products Co Inc — Hartford
Plainville Electrical Products Co The — Plainville

Electrical Goods
A C Gilbert Co — New Haven

Electrical Motors
U S Electrical Motors Inc — Milford

Electrical Outlet and Switch Boxes, and Covers
General Electric Company — Bridgeport

Electrical Recorders
Bristol Co The — Waterbury

Electrical Relays and Controls
Allied Control Co — Plantsville

Electrical Switchboards
Plainville Electrical Products Co The — Plainville

Electrical Wiring Systems
Wiremold Co The — Hartford

Electronics
Gray Manufacturing Company The — Hartford
Ripley Co — Middletown
Sturrup Larrabee & Warmers Inc — Middletown

Electroplating
National Sherardizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Electroplating—Equipment & Supplies
Enthone Inc — New Haven
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Electroplating Processes & Supplies
Enthone Inc — New Haven
United Chromium Incorporated — Waterbury

Electrotypes
Barnum-Hayward Electrotype Co Inc — New Haven
New Haven Electrotype Div Electrographic Corp — New Haven

Elevators
Eastern Machinery Co The (passenger and freight) — New Haven
General Elevator Service Co — Hartford

Enameling
Conn Metal Finishing Co — Hamden
Waterbury Plating Company — Waterbury

Enameling and Finishing
Clairglow Mfg Co — Portland

Enamels
Baer Brothers — Stamford

End Milling Cutters
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Engines
Pratt & Whitney Aircraft Div United Aircraft Corp (aircraft) — East Hartford
Wolverine Motor Works Inc (diesel stationary marine) — Bridgeport

Envelopes
Curtis 1000 Inc — Hartford
United States Envelope Company Hartford Division — Hartford

Envelopes—Stock and Special
American Paper Goods Company The — Kensington

Extractors—Tap
Walton Company The — West Hartford

Eyelets
American Brass Company The — Waterbury
Platt Bros & Co The P O Box 1030 — Waterbury
Plume & Atwood Mfg Co The — Waterbury
Scovill Manufacturing Company — Waterbury 91

Eylets, Ferrules and Wiring Terminals
American Brass Company The — Waterbury

Eylet Machine Products
Ball & Socket Mfg Co The — West Cheshire
American Brass Company The — Waterbury

Fancy Dress Buttons and Buckles
Waterbury Companies Inc — Waterbury

Fans—Electric
General Electric Company — Bridgeport

Fasteners—Slide & Snap
G E Prentice Mfg Co The — Kensington
Scovill Manufacturing Company (snap and slide fasteners) — Waterbury 91

Felt
Auburn Manufacturing Company The (mechanical, cut parts) — Middletown
Drycor Felt Company (paper makers and industrial) — Staffordville

Felt—All Purpose
American Felt Co (Mill & Cutting Plant) — Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Fenders—Boat
B F Goodrich Sponge Products Division — Shelton

Fibre Board
Case Brothers Inc — Manchester
C H Norton Co The — North Westchester
Stevens Paper Mills Inc The — Windsor

Finger Nail Clippers
H C Cook Co The — 32 Beaver St Ansonia

File Cards
Standard Card Clothing Co The — Stafford Springs

Films
Cine-Video Productions Inc — Milford

Firearms
Colt's Manufacturing Company — Hartford
Marlin Firearms Co The — New Haven
O F Mosberg & Sons Inc — New Haven
Remington Arms Company Inc — Bridgeport
Winchester Repeating Arms Company Division Olin Industries Inc — New Haven

Fire Hose
Fabrics Fire Hose (municipal and industrial) — Sandy Hook

Fireplace Goods
American Windshield & Specialty Co The 881 Boston Post Road — Milford
John P Smith Co The (screens) 423-33 Chapel St — New Haven

Fireproof Floor Joists
Dextone Co The — New Haven

Fireworks
M Backes' Sons Inc — Wallingford

Fishing Tackle
Bevin-Wilcox Line Co The (lines) — East Hampton
H C Cook Co The 32 Beaver St — Ansonia

Flashlights
Bond Electric Corporation Division of Olin Industries Inc — New Haven
Bridgeport Metal Goods Mfg Co — Bridgeport
Winchester Repeating Arms Company Division Olin Industries Inc — New Haven

Flat Springs
Bristol Spring Manufacturing Co — Plainville

Flexible Shaft Machines
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

(Advt.)

IT'S MADE IN CONNECTICUT

Floor & Ceiling Plates
Beaton & Cadwell Mfg Co The — New Britain

Fluorescent Lighting Equipment
Fullerton Manufacturing Corp — Norwalk
Vanderman Manufacturing Co The — Willimantic
Wiremold Company The — Hartford

Foam Rubber
B F Goodrich Sponge Products Division — Shelton

Food Mixing Machines
Colt's Manufacturing Company — Hartford

Forgings
Clark Brothers Bolt Co — Milldale
Consolidated Industries Inc — West Cheshire
Heppenstall Co (all kinds and shapes) — Bridgeport
Scovill Manufacturing Company (Non-ferrous) — Waterbury 91

Foundries
Connecticut Malleable Castings Co (malleable iron castings) — New Haven
Farrel-Birmingham Company Inc (Iron and Steel) — Ansonia
Charles Parker Company The (iron, brass, bronze, aluminum) — Meriden
Plainville Casting Company (gray, alloy and high tensile irons) — Plainville
Producto Machine Company The — Bridgeport
Stamford Casting Company Inc (Aluminum, Magnesium and Bronze) — Stamford
Stonington Div of Emhart Manufacturing Co — Stonington
Turner & Seymour Mfg Co The (gray iron, semi steel and alloy) — Torrington
Union Mfg Co (gray iron & semi steel) — New Britain
Wilcox Crittenden & Co Inc (iron, brass, aluminum and bronze) — Middletown

Fountain Pens and Mechanical Pencils
Waterman Pen Company Inc — Seymour

Foundry Riddles
John P Smith Co The — 423-33 Chapel St New Haven

Fuel Oil Pump and Heater Sets
Peabody Engineering Corporation — Stamford

Furnaces
Norwalk Airconditioning Corp The (warm air oil fired) — South Norwalk

Furnace Linings
Mullite Refractories Co The (refractories, super refractories) — Shelton

Fuses—Plug and Cartridge
General Electric Company — Bridgeport

Gage Blocks
Pratt & Whitney Div Niles-Bement-Pond Co (Alloy steel and Carbide, Hoke and USA) — West Hartford

Galvanizing
Malleable Iron Fittings Co — Branford
Wilcox Crittenden & Co Inc — Middletown

Galvanizing & Electrical Plating
Gillette-Vibber Co The — New London

Gaskets
Auburn Manufacturing Company The (from all materials) — Middletown
Raybestos Division of Raybestos-Manhattan Inc — Bridgeport
Tsingris Die Cutting Corp (from all materials) — Waterbury

Gas Range Conversion Burner
Holyoke Heater Corp of Conn Inc — Hartford

Gas Scrubbers, Coolers and Absorbers
Peabody Engineering Corporation — Stamford

Gauges
Bristol Co The (pressure and vacuum—recording automatic control) — Waterbury
Helicoid Gage Division American Chain & Cable Co The (pressure and vacuum) — Bridgeport
Manning Maxwell & Moore Inc — Stratford
Pratt & Whitney Div Niles-Bement-Pond Co (Precision Measurement all types) — West Hartford

Gears
Mitrametric Co The (blanked fine pitch) — Torrington

Gears and Gear Cutting
Farrel-Birmingham Company Inc — Ansonia
Hartford Special Machinery Co The — Hartford

Glass Blowing
Macalaster Bicknell Company — New Haven

Glass Cutters
Fletcher-Terry Co The — Forestville

Glass Making Machinery
Hartford-Empire Company Div of Emhart Manufacturing Co — Hartford

Golf Equipment
Horton Mfg Co The (clubs, shafts, balls, bags) — Bristol

Greeting Cards
A D Steinbach & Sons Inc — New Haven

Grinding
Farrel-Birmingham Company Inc (Roll and Cylindrical) — Ansonia
Hartford Special Machinery Co The (gears, threads cams and splines) — Hartford
Horberg Grinding Industries Inc (Precision custom grinding; centerless, cylindrical, surfaces, internal and special) — 19 Staples St Bridgeport

Grinding Heads—Internal
Pratt & Whitney Div Niles-Bement-Pond Co (Pneumatic, High Speed) — West Hartford

Grinding Machines
Farrel-Birmingham Company Inc (Roll) — Ansonia
Pratt & Whitney Div Niles-Bement-Pond Co (Surface, Die, Gear and Cutter Grinders) — West Hartford
Rowbottom Machine Company Inc (cam) — Waterbury

Grommets
American Brass Company The — Waterbury
Plume & Atwood Mfg Co The — Waterbury

Guards for Machinery
Wheeler Co The G E — New Haven

Hack and Band Saw Blades
Capewell Manufacturing Co The — Hartford

Hand Tools
Bridgeport Hdwe Mfg Corp The (nail pullers, scout axes, box opening tools, trowels, coping saws, putty knives) — Bridgeport

Hard Crome
City Plating Works Inc — Bridgeport

Hardness Testers
Wilson Mechanical Instrument Div American Chain & Cable Company Inc — Bridgeport

Hardware
Bassick Company The (Automotive) — Bridgeport
Harloc Products Corp — New Haven
P & F Corbin Division The American Hardware Corp (builders) — New Britain
Sargent & Company — New Haven
Wilcox Crittenden & Co Inc (marine heavy and industrial) — Middletown
Yale & Towne Mfg Co The — Stamford

Hardware—Marine & Bus
Rostand Mfg Co The — Milford

Hardware—Trailer Cabinet
Excelsior Hardware Co The — Stamford

Hardware, Trunk & Luggage
Corbin Cabinet Lock Div American Hardware Corp — New Britain
J H Sessions & Son — Bristol
Yale & Towne Mfg Co The — Stamford

Hat Machinery
Doran Bros Inc — Danbury

Health Surgical & Orthopedic Supports
Berger Brothers Company The (custom made for back, breast, and abdomen) — New Haven

Heat Exchangers
Whitlock Manufacturing Co The — Hartford

Heat Elements
Safeway Heat Elements Inc (woven wire resistance type) — Middletown

Heat Treating
A F Holden Co The 52 Richard St — West Haven
Bennett Metal Treating Co The 1045 New Britain Ave — Elmwood
New Britain-Gridley Machine Division The New Britain Machine Co — New Britain
Stanley P Rockwell Co Inc The 296 Homestead Ave — Hartford

Heat-Treating Equipment
Autoyre Company The — Oakville
Barnes Co The Wallace Div Associated Spring Corp — Bristol
A F Holden Company The 52 Richard Street — West Haven(Main Plant)
Bauer & Company Inc — Hartford
Rolock Inc (Retorts, Muffles, etc.) — Fairfield
Stanley P Rockwell Co Inc The (commercial) 296 Homestead Ave — Hartford

Heat Treating Fixtures
Rolock Inc (Trays, Baskets, etc.) — Fairfield
Wiretex Mfg Co Inc — Bridgeport

Heat Treating Salts and Compounds
A F Holden Company The 52 Richard Street — West Haven
Mitchell-Bradford Chemical Co — Bridgeport

Heating and Cooling Coils
G & O Manufacturing Co — New Haven

Heating Elements
Hartford Element Co — Hartford

Heavy Chemicals
Naugatuck Chemical Division United States Rubber Co (sulphuric, nitric and muriatic acids and aniline oil) — Naugatuck

Hex-Socket Screws
Bristol Company The — Waterbury
Holo-Krome Screw Corp The — West Hartford

Highway Guard Rail Hardware
Malleable Iron Fittings Co — Branford

Hinges
Homer D Bronson Company — Beacon Falls

Hobs and Hobbings
ABA Tool & Die Co — Manchester
Pratt & Whitney Div Niles-Bement-Pond Co (Die and Thread Milling) — West Hartford

Hoists
J-B Engineering Sales Co — New Haven

Hoists and Trolleys
Union Mfg Company — New Britain

Home Laundry Equipment
General Electric Company — Bridgeport

Hose—Flexible Metallic
American Brass Co
American Metal Hose Branch — Waterbury

Hose Supporter Trimmings
Hawie Mfg Co The (So-Lo Grip Tabs) — Bridgeport

Hospital Signal Systems
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc — Meriden

Hydraulic Brake Fluids
Eis Manufacturing Co — Middletown

Hydraulic Controls
Sperry Products Inc — Danbury

Hypodermic Needles
Roehr Products Company — Waterbury

Ice Buckets
B F Goodrich Sponge Products Division — Shelton

Inductors
C G S Laboratories Inc — Stamford

Industrial Finishes
Atlas Powder Co Zapon Div — Stamford
Chemical Coatings Corporation — Rocky Hill
United Chromium Incorporated — Waterbury

Industrial Tools—Powder Actuated
Remington Arms Company Inc — Bridgeport

Infra-Red Equipment
Leeds Electric and Mfg Co The — Hartford

Inks
Waterman Pen Company Inc — Seymour

Insecticides
American Cyanamid Company — Waterbury

Insecticide Bomb
Bridgeport Brass Company (Aer*a*sol) — Bridgeport

Insulated Wire & Cable
General Electric Company — Bridgeport
Kerite Company The — Seymour

Insulated Wire & Cable Machinery
Davis Electric Company — Wallingford

Instruments
Bristol Company The — Waterbury
J-P-T Instruments Inc (Electrical and Temperature) — New Haven
Manning Maxwell & Moore Inc — Stratford
Pratt & Whitney Div Niles-Bement-Pond Co (Precision Measuring) — West Hartford

Insulation
Gilman Brothers Co The — Gilman
(Advt.)

Inter-Communications Equipment
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Interval Timers
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford

Ironing Machines—Electric
General Electric Company Bridgeport

Jacquard
Case Brothers Inc Manchester

Japanning
J H Sessions & Son Bristol

Jig Borer
Moore Special Tool Co (Moore) Bridgeport
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Jig Grinder
Moore Special Tool Co (Moore) Bridgeport

Keller Machines
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Key Blanks
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Labels
J & J Cash Inc (Woven) South Norwalk
Naugatuck Chemical Division United States Rubber Co (for rubber articles) Naugatuck

Label Moisteners
Better Packages Inc Shelton

Laboratory Equipment
Eastern Industries Inc New Haven

Laboratory Supplies
Macalaster Bicknell Company New Haven

Laces
American Fabrics Company The Bridgeport
Wilcox Lace Corporation The Middletown

Laces and Nettings
Wilcox Lace Corporation The Middletown

Lacquers & Synthetic Enamels
Atlas Powder Co Zapon Div Stamford
Baer Brothers Stamford
Chemical Coatings Corporation Rocky Hill
United Chromium Incorporated Waterbury

Ladders
A W Flint Co 196 Chapel St New Haven

Lamps
Plume & Atwood Mfg Co The (metal oil) Waterbury

Lampholders—Incandescent and Fluorescent
General Electric Company Bridgeport

Lamp Shades
Verplex Company The Essex

Lathes—Contin-U-Matic
Bullard Company The (vertical multi-spindle-continuous turning type) Bridgeport

Lathes—30H Man-Au-Trol
Bullard Company The (horizontal 3 spindle) Bridgeport

Lathes—Mult-Au-Matic
Bullard Company The (vertical multi-spindle-indexing type) Bridgeport

Lathes—Toolroom and Automatic
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Lathes—Vertical Turret
Bullard Company The (single spindle) Bridgeport

Laundry Roll Covers
Atlas Powder Co Zapon Div Stamford

Lead Plating
Christie Plating Co The Groton

Leather
Herman Roser & Sons Inc (Genuine Pigskin) Glastonbury

Leather Dog Furnishings
Andrew B Hendryx Co The New Haven
The Smith-Worthington Saddlery Co Hartford

Leather Goods Trimmings
G E Prentice Mfg Co The Kensington

Leather, Mechanical
Auburn Manufacturing Company The (packings, cubs, washers, etc) Middletown

Letterheads
Lehman Brothers Inc (designers, engravers, lithographers) New Haven

Lighting Accessories—Fluorescent
General Electric Company Bridgeport

Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Miller Co The (Miller, Duplexalite, Ivanhoe) Meriden

Lime
New England Lime Company Canaan

Lipstick Containers
Bridgeport Metal Goods Mfg Co Bridgeport

Lithographers
O'Toole & Sons Inc T Stamford

Lithographing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford
Lehman Brothers Inc New Haven
A D Steinbach & Sons New Haven

Locks—Banks
Yale & Towne Mfg Co The Stamford

Locks—Builders
Eagle Lock Co The Terryville
P & F Corbin Division The American Hardware Corp New Britain
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Locks—Cabinet
Eagle Lock Co The Terryville
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Special Purpose
Eagle Lock Co The Terryville
Yale & Towne Mfg Co The Stamford

Locks—Suitcase
Eagle Lock Co The Terryville

Locks—Suit-Case and Trimmings
Excelsior Hardware Co The Stamford

Locks—Trunk
Eagle Lock Co The Terryville
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Zipper
Excelsior Hardware Co The Stamford

Loom—Non-Metallic
Wiremold Company The Hartford

Lumber & Millwork Products
City Lumber Co of Bridgeport Inc Bridgeport

Machetes
Collins Company The Collinsville

Machine Design
Black Rock Mfg Company The Bridgeport

Machine Tools
Bullard Company The Bridgeport
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford
Producto Machine Company The Bridgeport

Machine Work
Black Rock Mfg Company The Bridgeport
Farrel-Birmingham Company Inc Ansonia
Fenn Manufacturing Company The (precision parts) Hartford
Hartford Special Machinery Co The (contract work only) Hartford
National Sheradizing & Machine Co (job) Hartford
Parker Stamp Works Inc The (Special) Hartford
Swan Tool & Machine Co The Hartford
Torrington Manufacturing Co The (special rolling mill machinery) Torrington

Machinery
Fenn Manufacturing Company The (special) Hartford
Globe Tapping Machine Company (dial type drilling and tapping) Bridgeport
Hallden Machine Company The (mill) Thomaston
Torrington Manufacturing Co The (mill) Torrington

Machinery—Bolt and Nut
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Cold Heading
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery Dealers & Rebuilders
Botwinik Brothers New Haven
J L Lucas and Son Fairfield
State Machinery Co Inc New Haven

Machinery—Extruding
Standard Machinery Co The Mystic

Machinery—Metal-Working
Waterbury Farrel Foundry & Machine Co The Waterbury
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Machinery—Nut
Waterbury Farrel Foundry & Machine Co The (forming and tapping) Waterbury

Machinery—Screw and Rivet
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Wire Drawing
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Wire Straightening
Mettler Machine Tool Inc New Haven

Machines
Campbell Machine Div American Chain & Cable Co Inc (cutting & nibbling) Bridgeport
Coulter & McKenzie Machine Co The (special, new development engineering design and construction) Bridgeport
Patent Button Company The Waterbury

Machines—Automatic
A H Nilson Mach Co The (Special) Bridgeport

Machines—Automatic Chucking
Bullard Company The Bridgeport
New Britain-Gridley Machine Division The New Britain Machine Co (multiple spindle and double end) New Britain
Pratt & Whitney Div Niles-Bement-Pond Co (Potter & Johnson) West Hartford

Machines—Automatic Screw
New Britain-Gridley Machine Division The New Britain Machine Co (single and multiple spindle) New Britain

Machines—Automatic Shaft Turning
Bullard Company The (30H lathe—horizontal 3 spindle) Bridgeport

Machines—Brushing
Fuller Brush Co The Hartford

Machines—Contin-U-Matic
Bullard Company The (verticle multi-spindle—continuous turning) Bridgeport

Machines—Draw Benches
Fenn Manufacturing Company The Hartford

Machines—Drill Spacing
Bullard Company The (Bullard spacer—used in conjunction with radical drills) Bridgeport

Machines—Drop Hammers
Fenn Manufacturing Company The Hartford

Machines—Forming
A H Nilson Mach Co The (four-slide wire and ribbon stock) Bridgeport

Machines—Mult-Au-Matic
Bullard Company The Bridgeport

Machines—Paper Ruling
John McAdams & Sons Inc Norwalk

Machines—Pipe & Bolt Threading
Capewell Mfg Co The Hartford
(Advt.)

Machines—Precision Boring
New Britain-Gridley Machine Division The New Britain Machine Co New Britain

Machines—Rolling
Fenn Manufacturing Company The Hartford

Machine—Slotting
Globe Tapping Machine Company The (High Production Screw Head Slotting) Bridgeport
Waterbury Farrel Foundry & Machine Co The (screw head) Waterbury

Machines—Special
Fuller Brush Co The Hartford

Machines—Swaging
Fenn Manufacturing Company The Hartford

Machines—Thread Rolling
Hartford Special Machinery Co The Hartford
Waterbury Farrel Foundry & Machine Co The Waterbury

Machines—Turks Head
Fenn Manufacturing Company The Hartford

Machines—Well Drilling
Consolidated Industries West Cheshire

Machines—Wire Drawing
Fenn Manufacturing Company The Hartford

Magnesium Castings
Stamford Casting Company Stamford

Manicure Instruments
W E Bassett Company The Derby

Manganese Bronze Ingot
Whipple and Choate Company Bridgeport

Marine Engines
Kilborn-Sauer Company (running lights and searchlights) Fairfield
Lathrop Engine Co The Mystic

Marine Equipment
Russell Manufacturing Company The (utility cord and accessory hardware) Middletown
Wilcox Crittenden & Co Inc Middletown

Marine Reserve Gears
Snow-Nabstedt Gear Corp The New Haven

Marking Devices
Hoggson & Pettis Mfg Co The New Haven
Parker Stamp Works Inc The (steel) Hartford

Mattresses
Waterbury Mattress Co Waterbury

Metal Boxes and Displays
Durham Manufacturing Company The Durham
Merriam Mfg Co (Bond, Security, Cash, Utility, Personal Files, Drawer Safes, Custombilt containers and dsiplays) Durham

Metal Cleaners
Apothecaries Hall Co Waterbury
Enthone Inc New Haven
MacDermid Incorporated Waterbury

Metal Cleaning Machines
Colt's Manufacturing Company Hartford

Metal Finishes
Enthone Inc New Haven
Mitchell-Bradford Chemical Co Bridgeport
United Chromium Incorporated Waterbury

Metal Finishing
National Sheradizing & Machine Co Hartford
Waterbury Plating Company Waterbury

Metal Formings
Master Engineering Company West Cheshire
Stanley Pressed Metal New Britain

Metalizing
Conn Metal Finishing Co Hamden

Metal Novelties
H C Cook Co The 32 Beaver St Ansonia

Metal Products—Stampings
American Brass Company The Waterbury
I H Sessions & Son Bristol
Scovill Manufacturing Company (Made-to-Order) Waterbury 91
Stanley Pressed Metal New Britain

Metal Specialties
Excelsior Hardware Co The Stamford

Metal Stampings
American Brass Company The Waterbury
Autoyre Co The (Small) Oakville
Bridgeport Chain & Mfg Co Bridgeport
DooVal Tool & Mfg Inc The Naugatuck
Excelsior Hardware Co The Stamford
Greist Mfg Co The 503 Blake St New Haven
H C Cook Co The 32 Beaver St Ansonia
Humason Mfg Co The Forestville
J A Otterbein Company The (metal fabrications) Middletown
J. H. Sessions & Son Bristol
Patent Button Co The Waterbury
G E Prentice Mfg Co The Kensington
Plume & Atwood Mfg Co The Waterbury
Saling Manufacturing Company Unionville
Stanley Pressed Metal New Britain
Swan Tool & Machine Co The Hartford
United States Rubber Company Shoe Hardware Division Waterbury
Verplex Company The (Contract) Essex
Waterbury Lock & Specialty Co The Milford

Meters—Gas
Sprague Meter Company Bridgeport

Meters—Parking
Rhodes Inc M H Hartford

Microfilming
American Microfilming Service Company New Haven

Microscope—Measuring
Lundeberg Engineering Company Hartford

Milk Bottle Carriers
John P Smith Co The 423-33 Chapel St New Haven

Millwork
Hartford Builders Finish Co Hartford

Milling Machines
Pratt & Whitney Div Niles-Bement-Pond Co (Keller Tracer—Controlled Milling Machines) West Hartford
Rowbottom Machine Company Inc (cam) Waterbury

Mill Supplies
Wilcox Crittenden & Co Inc Middletown

Miniature Precision Connectors
Gorn Electric Co Stamford

Minute Minders
Lux Clock Mfg Co The Waterbury

Mirror Rosettes and Hangers
Waterbury Companies Inc Waterbury

Mixing Equipment
Eastern Industries Inc New Haven

Mops
Fuller Brush Co The Hartford

Moulded Plastic Products
Butterfield Inc T F Naugatuck
Colt's Manufacturing Company Hartford
Patent Button Co The Waterbury
Waterbury Companies Inc Waterbury
Watertown Mfg Co The 117 Echo Lake Road Watertown

Mouldings
Himmel Brothers Co The (architectural, metal and store front) Hamden

Moulds
ABA Tool & Die Co Manchester
Hoggson & Pettis Mfg Co The (steel) 114 Brewery St New Haven
Lundeberg Engineering Company (plastics) Hartford
Parker Stamp Works Inc The (compression injection & transfer for plastics) Hartford

Napper Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Nettings
Wilcox Lace Corp The Middletown

Nickel Anodes
Apothecaries Hall Co Waterbury
Seymour Mfg Co The Seymour

Nickel Silver
American Brass Company The Waterbury
Plume & Atwood Mfg Co The Thomaston
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) New Haven

Nickel Silver Ingot
Whipple and Choate Company The Bridgeport

Night Latches
P & F Corbin Division The American Hardware Corp New Britain
Sargent & Company New Haven
Yale & Towne Mfg Co Inc Stamford

Non-ferrous Metal Castings
Miller Company The Meriden

Nuts, Bolts and Washers
Clark Brothers Bolt Co Milldale

Office Equipment
Pitney-Bowes Inc Stamford
Underwood Corporation Bridgeport & Hartford

Offset Printing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford

Oil Burners
Malleable Iron Fittings Co (domestic) Branford
Miller Company The (domestic) Meriden
Peabody Engineering Corp (Mechanical and/or Steam Atomizer) Stamford
Silent Glow Oil Burner Corp The 1477 Park St Hartford

Oil Tanks
Norwalk Tank Co The (550 to 30M gals, underwriters above and under ground) South Norwalk
Whitlock Manufacturing Co The Hartford

Optical Cores & Ingots
Plume & Atwood Mfg Co The Thomaston

Otis Woven Awning Stripes
The Falls Company Norwich

Outlets—Electric
General Electric Company Bridgeport

Ovens—Electric
Bauer & Company Inc Hartford

Package Sealers
Better Packages Inc Shelton

Packaging
Local Industries Inc (merchandising displays and packaging in wood) Lakeville

Packaging Machinery
Colt's Manufacturing Company (box making machinery. Trade mark "Rite Size") Hartford
Standard-Knapp Division of Emhart Manufacturing Co Portland

Packing
Auburn Manufacturing Company The (leather, rubber, asbestos, fibre) Middletown
Raybestos Division of Raybestos-Manhattan Inc (Asbestos and Rubber Sheet) Bridgeport

Pads—Office
The Baker Goodyear Company New Haven

Padlocks
Sargent & Company New Haven
Waterbury Lock & Specialty Co The Milford
Yale & Towne Mfg Co Inc Stamford

Paints
Baer Brothers Stamford

Paints and Enamels
Staminate Corp The New Haven

Pants
Moore Special Tool Co (crush wheel dresser) Bridgeport

Paperboard
Gair Company Inc Robert Montville
Robertson Paper Box Co Montville
New Haven Pulp and Board Co The New Haven

Paper Boxes
Atlantic Carton Corp (folding) Norwich
Gair Co Inc Robert (folding) Montville
National Folding Box Co Inc (folding) New Haven
New Haven Board and Carton Co The New Haven
Mills Inc H J Bristol
Robertson Paper Box Co (folding) Montville

Paper Boxes—Folding and Setup
Bridgeport Paper Box Company Bridgeport
M Backes' Sons Inc Wallingford

Paper Clips
H C Cook Co The (steel) 32 Beaver St Ansonia (Advt.)

Paper Mill Machinery
Farrel-Birmingham Company Inc — Ansonia

Paper Tubes and Cores
Sonoco Products Co (Climax-Lowell) Div — Mystic

Parallel Tubes
Sonoco Products Co (Climax-Lowell) Div — Mystic

Parkerizing
Clairglow Mfg Company — Portland

Parking Meters
Rhodes Inc M H — Hartford

Passenger Car Sander
Conn Telephone & Electric Corp — Subsidiary of Great American Industries Inc — Meriden

Pattern-Makers
Farrel-Birmingham Company Inc — Ansonia

Penlights
Bridgeport Metal Goods Mfg Co — Bridgeport

Pet Furnishings
Andrew B Hendrix Co The — New Haven

Pharmaceutical Specialties
Ernst Bischoff Company Inc — Ivoryton

Phosphor Bronze
American Brass Company The — Waterbury
Miller Company The (sheets, strips, rolls) — Meriden
Seymour Mfg Co The — Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) — Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) — New Haven

Phosphor Bronze Ingots
Whipple and Choate Company The — Bridgeport

Photographic Equipment
Kalart Company Inc — Plainville

Piano Repairs
Pratt Read & Co Inc (keys and action) — Ivoryton

Piano Supplies
Pratt Read & Co (keys and actions, backs, plates) — Ivoryton

Pins
CEM Company ("Spirol") — Danielson

Pin Up Lamps
Verplex Company The — Essex

Pipe
American Brass Co The (brass and copper) — Waterbury
Bridgeport Brass Co (brass and copper) — Bridgeport
Chas Brass & Copper Co (red brass and copper) — Waterbury
Crane Company (fabricated) — Bridgeport
Howard Co (cement well and chimney) — New Haven

Pipe Fitter's Hand Tools & Machines
Capewell Mfg Co The — Hartford

Pipe Fittings
Corley Co Inc — Plainville
Malleable Iron Fittings Co — Branford

Pipe Plugs
Holo-Krome Screw Corporation The (countersunk) — West Hartford

Pipe Plugs—Socketed
Holo-Krome Screw Corp The — West Hartford

Plastics
B F Goodrich Sponge Products Division — Shelton
Naugatuck Chemical Division United States Rubber Co — Naugatuck

Plastic Bottles
Plax Corporation, subsidiary of Emhart Manufacturing Co — West Hartford

Plastic Buttons
Frank Parizek Manufacturing Co The — West Willington
Patent Button Co The — Waterbury

Plastic Gems
Colt's Manufacturing Company — Hartford

Plastic Films and Sheet
Plax Corporation, subsidiary of Emhart Manufacturing Co — West Hartford

Plastic Rod and Tubing
Plax Corporation, subsidiary of Emhart Manufacturing Co — West Hartford

Plastic Materials
American Cyanamid Co (Molding Compounds, Adhesives, Laminating Resins) — Wallingford

Plastics Machinery
Black Rock Mfg Company The — Bridgeport
Farrel-Birmingham Company Inc — Ansonia

Plastic Molders
Plastic Molding Corporation — Sandy Hook

Plastic Molding
U S Plastic Molding Corporation — Wallingford

Plastic—Moulders
Colt's Manufacturing Company — Hartford
Conn Plastics — Waterbury
General Electric Company — Meriden
Waterbury Companies Inc — Waterbury
Watertown Mfg Co The — Watertown

Plastics—Moulds & Dies
Parker Stamp Works Inc The (for plastics) — Hartford

Plasticrete Bloc
Plasticrete Corp — Hamden

Plates—Switch
General Electric Company — Bridgeport

Platers
American Metal Products Company Inc — Bridgeport
Christie Plating Co — Groton
City Plating Works — Bridgeport
Patent Button Co The — Waterbury
Waterbury Plating Company — Waterbury
Chromium Process Company The (Chromium Plating only) — Derby

Platers' Equipment
Apothecaries Hall Company — Waterbury
Conn Metalcraft Inc — New Haven
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Platers Metal
Plume & Atwood Mfg Co The — Thomaston

Plating
Christie Plating Co The (including lead plating) — Groton
Conn Metal Finishing Co — Hamden

Plating Processes and Supplies
Enthone Inc — New Haven
United Chromium Incorporated — Waterbury

Plumbers' Brass Goods
Bridgeport Brass Co — Bridgeport
Keeney Mfg Co The (special bends) — Newington
Scovill Manufacturing Company — Waterbury 48

Plumbing Specialties
John M Russell Mfg Co Inc — Naugatuck

Pole Line Hardware
Malleable Iron Fittings Co — Branford

Police Equipment
The Smith-Worthington Saddlery Co — Hartford

Polishing Wheels
Williamsville Buff Div The Bullard Clark Company — Danielson

Poly Chokes
Poly Choke Company The (a shotgun choking device) — Tariffville

Postage Meters
Pitney Bowes Inc — Stamford

Potentiometers—Electronic
Bristol Company The — Waterbury

Power Presses
Fenn Manufacturing Company The — Hartford

Power Rollers
Consolidated Industries Inc — West Cheshire

Prefabricated Buildings
City Lumber of Bridgeport Inc The — Bridgeport

Premium Specialties
Waterbury Companies Inc — Waterbury

Preservatives—Wood, Rope, Fabric
Darworth Incorporated ("Cuprinol") — Simsbury

Press Papers
Case Brothers Inc — Manchester

Presses
Farrel-Birmingham Company Inc (Hydraulic — Ansonia
Henry & Wright Div of Emhart Manufacturing Company — Hartford

Presses—Molding
Standard Machinery Co The (compression and transfer molding, automatic and semi-automatic) — Mystic

Presses—Power
Waterbury Farrel Foundry & Machine Co The — Waterbury

Pressure Vessels
Norwalk Tank Co Inc The (unfired to ASME Code Par U 69-70) — South Norwalk
Whitlock Manufacturing Co The — Hartford

Printing
Case Lockwood & Brainard A Division of Connecticut Printers Inc — Hartford
Finlay Brothers — Hartford
Heminway Corporation The — Waterbury
Hunter Press — Hartford
Lehman Brothers Inc — New Haven
Taylor & Greenough Co The — Wethersfield
T B Simonds Inc — Hartford
A D Steinbach & Sons — New Haven
The Walker-Rackliff Company — New Haven

Printing Machinery
Banthin Engineering Co (automatic) — Bridgeport
Thomas W Hall Company — Stamford

Printing Rollers
Chambers-Storck Company Inc The (engraved) — Norwich

Production Control Equipment
United Cinephone Corporation — Torrington

Production Welding
Consolidated Industries — West Cheshire

Profilers
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Propellers—Aircraft
Hamilton Standard Div United Aircraft Corp (propellors and other aircraft equipment) — Windsor Locks

Protective Coatings
Harrison Company The A S (Waxes) — South Norwalk

Publishers
O'Toole & Sons Inc T — Stamford

Pumps
Yale & Towne Mfg Co The — Stamford

Pumps—Small Industrial
Eastern Industries Inc — New Haven

Pump Valves
Colt's Manufacturing Company — Hartford

Punches
Hoggson & Pettis Mfg Co The (ticket & cloth) 141 Brewery St — New Haven

Putty Softeners—Electrical
Fletcher Terry Co The — Box 415 Forestville

Pyrometers
Bristol Co The (recording and controlling) — Waterbury

Radiation—Finned Copper
Bush Manufacturing Co — West Hartford
G & O Manufacturing Company The — New Haven
Vulcan Radiator Co The (steel and copper) — Hartford

Radiators—Engine Cooling
G & O Manufacturing Co — New Haven

Rayon Staple Fiber
Hartford Rayon Corp The — Rocky Hill

Reamers
Pratt & Whitney Div Niles-Bement-Pond Co (All types) — West Hartford

Recorders
Bristol Co The (automatic controllers, temperature, pressure, flow, humidity) — Waterbury

Reduction Gears
Farrel-Birmingham Company Inc — Ansonia
Snow-Nabstedt Gear Corp The — New Haven

Refractories
Howard Company — New Haven
Mullite Refractories Company The — Shelton

Refrigeration
Bowser Technical Refrigeration Div Bowser Inc (high altitude, low temperature) — Terryville

Regulators
Norwalk Valve Company (for gas and air) — South Norwalk
Sorensen & Company Inc — Stamford

Remote Control Wiring
General Electric Company — Bridgeport

Resistance Wire
C O Jeliff Mfg Co The (nickel chromium, copper nickel, iron chromium, aluminum) — Southport
Kanthal Corporation The (Kanthal A-1, A, D, DS) — Stamford

Respirators
American Optical Company Safety Products Division — Putnam

Retainers
Hartford Steel Ball Co The (bicycle & automotive) — Hartford

Riveting Machines
Grant Mfg & Machine Co The — Bridgeport
H P Townsend Manufacturing Co The — Elmwood
L-R Mfg Div of The Ripley Co — Torrington

(Advt.)

IT'S MADE IN CONNECTICUT

Rivets
Blake & Johnson Co The (brass, copper and non-ferrous) Waterville
Clark Brothers Bolt Co Milldale
Connecticut Manufacturing Company The Waterbury
Plume & Atwood Mfg Co The Waterbury
Raybestos Div of Raybestos-Manhattan Inc The (brass and aluminum tubular and solid copper) Bridgeport
Raybestos Div of Raybestos-Manhattan Inc The (iron) Bridgeport

Rods
American Brass Company The (copper, brass, bronze) Waterbury
Bristol Brass Corp The (brass and bronze) Bristol
Scovill Manufacturing Company (brass and bronze) Waterbury 91

Rollers—Bituminous Paving
Gabb Special Products Div E Horton & Son Company Windsor Locks

Roller Skate Wheels
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Roller Skates
Winchester Repeating Arms Company Division Olin Industries Inc New Haven

Rolling Mills and Equipment
Farrel-Birmingham Company Inc Ansonia
Waterbury Farrel Foundry & Machine Co The Waterbury

Rolls
Farrel-Birmingham Company Inc (Chilled and Alloy Iron, Steel) Ansonia

Rope Wire
American Steel & Wire Div of U S Steel New Haven

Rubber Chemicals
Naugatuck Chemical Division United States Rubber Co Naugatuck
Stamford Rubber Supply Co The ("Factice" Vulcanized Vegetable Oils) Stamford

Rubber—Cellular
B F Goodrich Sponge Products Division Shelton

Rubber Cutting Machinery
Black Rock Mfg Company The Bridgeport

Rubberized Fabrics
Duro-Gloss Rubber Co The New Haven

Rubber Footwear
Goodyear Rubber Co The Middletown

Rubber Gloves
Seamless Rubber Company The New Haven

Rubber—Handmade Specialties
Seamless Rubber Company The New Haven

Rubber—Latex Foam
B F Goodrich Sponge Products Division Shelton

Rubber Latex Compounds and Dispersions
Naugatuck Chemical Division United States Rubber Co (coating, impregnating and adhesive compounds) Naugatuck

Rubber Mill Machinery
Farrel-Birmingham Company Inc Ansonia

Rubber—Molded Specialties
Canfield Co The H O Bridgeport
Seamless Rubber Company The New Haven

Rubber Products—Mechanical
Auburn Manufacturing Company The (washers, gaskets, molded parts) Middletown
Canfield Co The H O Bridgeport
Seamless Rubber Company The New Haven

Rubber—Reclaimed
Naugatuck Chemical Division United States Rubber Co Naugatuck

Rubber Vibration Pads
MB Manufacturing Company Inc The (and shocks absorbing—Isomode) New Haven

Rubbish Burners
John P Smith Co The 423-33 Chapel St New Haven

Saddlery
The Smith-Worthington Saddlery Co Hartford

Safety Clothing
American Optical Company Safety Products Division Putnam

Safety Fuses
Ensign-Bickford Co The (mining & detonating) Simsbury

Safety Gloves and Mittens
American Optical Company Safety Products Division Putnam

Safety Goggles
American Optical Company Safety Products Division Putnam

Saw Blades—Hack
Capewell Mfg Co The Hartford

Saws—Metal & Wood Cutting Band
Capewell Mfg Co The Hartford

Saws, Band, Metal Cutting
Atlantic Saw Mfg Co New Haven

Scales—Industrial Dial
Kron Company The Bridgeport

Scissors
Acme Shear Company The Bridgeport

Screens
Hartford Wire Works Co The (Windows, Doors and Porches) Hartford

Screw Caps
Weimann Bros Mfg Co The (small for bottles) Derby

Screw Machine Accessories
Barnaby Manufacturing and Tool Co Bridgeport

Screw Machines
H P Townsend Mfg Company The Elmwood

Screw Machine Products
Apex Tool Co Inc The Bridgeport
Blake & Johnson Co The Waterville
Horberg Grinding Industries Inc (Heat treated and ground type only)
19 Staples Street Bridgeport
Connecticut Manufacturing Company The Waterbury
Consolidated Industries West Cheshire
Eastern Machine Screw Corp The
Truman & Barclay Sts New Haven
Fairchild Screw Products Inc Winsted
Franklin Screw Machine Co The (up to 1½" capacity) Hartford
Greist Mfg Co The (Up to 1½" capacity) New Haven
Humason Mfg Co The Forestville
Lowe Mfg Co The Wethersfield
National Automatic Products Company The Berlin
Nelson's Screw Machine Products Plantsville
New Britain Machine Company The New Britain
Olson Brothers Company (up to ¾" capacity) Plainville
Olson & Sons R P Southington
Peck Spring Co The Plainville
Plume & Atwood Mfg Co The Waterbury
Scovill Manufacturing Company Waterbury 91
Waterbury Machine Tools & Products Co (Brown & Sharpe and Davenport) Waterbury

Screw Machine Tools
American Cam Company Inc (Circular Form Tools Hartford
Pratt & Whitney Div Niles-Bement-Pond Co (Reamers, Taps, Dies, Blades and Knurls) West Hartford
Somma Tool Co (precision circular form tools) Waterbury

Screws
American Screw Company Willimantic
Atlantic Screw Works (wood) Hartford
Blake & Johnson Co The (machine and wood) Waterville
Bristol Company The (socket set and socket cap screws) Waterbury
Clark Brothers Bolt Co Milldale
Connecticut Mfg Co The (machine) Waterbury
Eagle Lock Co The Terryville
Holo-Krome Screw Corporation The (socket set and socket cap) West Hartford
Scovill Manufacturing Company Waterbury 91
Superior Manufacturing Co The Winsted

Screw—Sockets
Allen Manufacturing Company The Hartford
Bristol Co The Waterbury
Holo-Krome Screw Corp The West Hartford

Sealing Tape Machines
Better Packages Inc Shelton

Sewing Machines
Greist Mfg Co The (Sewing Machine attachments) 503 Blake St New Haven
Merrow Machine Co The (Industrial) Hartford
Singer Manufacturing Company The (industrial) Bridgeport

Shaving Soaps
J B Williams Co The Glastonbury

Shears
Acme Shear Co The (household) Bridgeport

Shells
Wolcott Tool and Manufacturing Company Inc Waterbury

Sheet Metal Products
American Brass Co The (brass and copper) Waterbury
Merriam Mfg Co (security boxes, fitted tool boxes, tackle boxes, displays) Durham
Plume & Atwood Mfg Co The Waterbury
United Manufacturing Co Division of The W L Maxson Corp Hamden

Sheet Metal Stampings
American Brass Company The Waterbury
American Buckle Co The West Haven
DooVal Tool & Mfg Inc The Naugatuck
J H Sessions & Son Bristol
Patent Button Co The Waterbury
Plume & Atwood Mfg Co The Waterbury

Shipment Sealers
Better Packages Inc Shelton

Showcase Lighting Equipment
Wiremold Company The Hartford

Signals
H C Cook Co The (for card files) 32 Beaver St Ansonia

Signs
Berger Sign Co (neon electric-porcelain enamel-stainless steel) Hartford

Silk Screening on Metal
Merriam Mfg Co (Displays and Specialties, to order) Durham

Sintered Metal Products
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Sizing and Finishing Compounds
American Cyanamid Company Waterbury

Slide Fasteners
G E Prentice Mfg Co The Kensington
North & Judd Manufacturing Co New Britain
Patent Button Co The Waterbury

Slings
American Steel & Wire Div of U. S. Steel New Haven

Smoke Stacks
Bigelow Company The (steel) New Haven
Norwalk Tank Co The South Norwalk

Soap
J B Williams Co The (industrial soaps, toilet soaps, shaving soaps) Glastonbury

Special Machinery
Black Rock Mfg Company The Bridgeport
Farrel-Birmingham Company Inc Ansonia
H P Townsend Mfg Company The Elmwood
Lundeberg Engineering Company Hartford
National Sheradizing & Machine Co (mandrels & stock shells for rubber industry) Hartford
Swan Tool & Machine Co The Hartford

Special Parts
Greist Mfg Co The (small machines, especially precision stampings) New Haven
J H Sessions & Son Bristol

Special Tool & Dies
Lundeberg Engineering Company Hartford

Spinnnings
American Metal Products Company Inc Bridgeport
Gray Manufacturing Company The Hartford

Sponge Rubber
B F Goodrich Sponge Products Division Shelton

Spray Painting Equipment and Supplies
Lea Manufacturing Co The Waterbury

Spring Coiling Machines
Torrington Manufacturing Co The Torrington

Spring Units
Owen Silent Spring Division American Chain & Cable Company Inc Bridgeport

Spring Washers
Barnes Co The Wallace Div Associated Spring Corp Bristol

(Advt.)

Springs—Coil & Flat
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Foursome Manufacturing Co Bristol
Humason Mfg Co The Forestville
Newcomb Spring Corp The Southington
New England Spring Manufacturing Company Unionville
Peck Spring Co The Plainville

Springs—Flat
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Foursome Manufacturing Co Bristol
New England Spring Manufacturing Company Unionville
Humason Mfg Co The Forestville

Springs—Furniture
Owen Silent Spring Division American Chain & Cable Company Inc Bridgeport

Springs—Wire
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Colonial Spring Corporation The Hartford
Connecticut Spring Corporation The (compression, extension, torsion) Hartford
Foursome Manufacturing Co Bristol
Humason Mfg Co The Forestville
D R Templeman Co (coil and torsion) Plainville
J W Bernston Company (coil and torsion) Plainville
Newcomb Spring Corp The Southington
New England Spring Mfg Co Bridgeport

Springs, Wire & Flat
Autoyre Company The Oakville

Stamped Metal Products
American Brass Company The Waterbury

Stamps
Hoggson & Pettis Mfg Co The (steel) 141 Brewery St New Haven
Parker Stamp Works Inc The (steel) Hartford

Stampings
American Metal Products Company Inc Bridgeport
Donahue Mfg Co Inc Watertown
DooVal Tool & Mfg Inc The Naugatuck
Foursome Manufacturing Co Bristol
Plume & Atwood Mfg Co The (small) Waterbury
Stanley Pressed Metal New Britain

Stampings—Small
Acme Shear Co The Bridgeport
American Metal Products Company Inc Bridgeport
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Greist Manufacturing Co The New Haven
Humason Mfg Co The Forestville

Stationery Specialties
American Brass Company The Waterbury

Steel
Stanley Works The (cold rolled strip) New Britain

Steel Castings
Farrel-Birmingham Company Inc Ansonia
Hartford Electric Steel Co The (carbon and alloy steel) 540 Flatbush Ave Hartford
Malleable Iron Fittings Co Branford
Nutmeg Crucible Steel Co Branford

Steel—Cold Rolled Spring
Barnes Co The Wallace Div Associated Spring Corp Bristol

Steel—Cold Rolled Stainless
Wallingford Steel Company Wallingford

Steel—Cold Rolled Strip and Sheets
American Steel & Wire Div of U S Steel New Haven
Detroit Steel Corporation New Haven
Wallingford Steel Company Wallingford

Steel Goods
Merriam Mfg Co (sheets products to order) Durham

Steel Rolling Rules
Waterbury Lock & Specialty Co The Milford

Steel Strapping
Stanley Works The New Britain

Stereotypes
New Haven Electrotype Div Electrographic Corp New Haven

Stop Clocks, Electric
H C Thompson Clock Co The Bristol

Straps, Leather
Auburn Manufacturing Company The (textile, industrial, skate, carriage) Middletown

Studio Couches
Waterbury Mattress Co Waterbury

Super Refractories
Mullite Refractories Company The Shelton

Surface Metal Raceway & Fittings
Wiremold Company The Hartford

Surgical Dressings
Acme Cotton Products Co Inc East Killingly
Seamless Rubber Company The New Haven

Surgical Rubber Goods
Seamless Rubber Company The New Haven

Switches—Electric
General Electric Company Bridgeport

Swaging Machinery
Hartford Special Machinery Co The Hartford

Switchboards Wire and Cables
Rockbestos Products Corp (asbestos insulated) New Haven

Synchronous Motors
R W Cramer Company Inc The Centerbrook

Synthetic Resins
American Cyanamid Co (Textile Resins, Paper Resins) Waterbury

Tabulating Equipment—Manual
Denominator Company Inc Woodbury

Tanks
Bigelow Company The (steel) New Haven
Norwalk Tank Co The South Norwalk
Rolock Inc (Alloy) Fairfield
Storts Welding Company (steel and alloy) Meriden

Tape
Russell Manufacturing Company The (woven cotton and woven glass tape) Middletown

Tapes—Industrial Pressure Sensitive
Seamless Rubber Company The New Haven

Tape Recorders
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Tape Recorder Magazines
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Tap Extractors
Walton Company The West Hartford

Taps
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Tarred Lines
Brownell & Co Inc Moodus

Telemetering Instruments
Bristol Co The Waterbury

Telephone Answering & Recording Machines
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Testers—Insulation Wire & Cable
Davis Electric Company Wallingford

Testers—Non-Destructive
Sperry Products Inc Danbury

Textile Machinery
Merrow Machine Co The 2814 Laurel St Hartford

Textile Mill Supplies
Ernst Bischoff Company Inc Ivoryton

Textile Processors
American Dyeing Corporation (rayon, acetate, nylon, dacron, other synthetics) Rockville

Thermometers
Bristol Co The (recording and automatic control) Waterbury
Manning Maxwell & Moore Inc Stratford

Thermostats
Bridgeport Thermostat Company Inc (automatic) Bridgeport

Thin Gauge Metals
Plume & Atwood Mfg Co The Thomaston
Thinsheet Metals Co The (plain or tinned in rolls) Waterbury

Thread
American Thread Co The Willimantic
Belding Heminway Corticelli Putnam
Max Pollack & Co Inc Groton and Willimantic
Wm Johl Manufacturing Co Mystic

Thread Gages
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Thread Milling Machines
Pratt & Whitney Div Niles-Bement-Pond Co West Hartford

Thread Rolling Machinery
Hartford Special Machinery Co The Hartford

Threading Machines
Grant Mfg & Machine Co The (double and automatic) Bridgeport

Timers, Interval
A W Haydon Co The Waterbury
H C Thompson Clock Co The Bristol
R W Cramer Company Inc The Centerbrook
Rhodes Inc M H Hartford

Timing Devices
A W Haydon Co The Waterbury
R W Cramer Company Inc The Centerbrook
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford
Seth Thomas Clocks Thomaston
United States Time Corporation The Waterbury

Timing Devices & Time Switches
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
M H Rhodes Inc Hartford

Tinning
Thinsheet Metals Co The (non-ferrous metals in rolls) Waterbury
Wilcox Crittenden & Co Inc Middletown

Tools
Hoggson & Pettis Mfg Co The (rubber workers) 141 Brewery St New Haven

Tool Chests
Vanderman Manufacturing Co The Willimantic

Tool & Dies
Moore Special Tool Co Bridgeport
Swan Tool & Machine Co The Hartford

Tools, Dies & Fixtures
Greist Mfg Co The New Haven

Tools—Pipe Fitters' Hand
Capewell Mfg Co The Hartford

Toys
Geo S Scott Mfg Co The Wallingford
Gong Bell Co The East Hampton
N N Hill Brass Co The East Hampton
Waterbury Companies Inc Waterbury

Tramways
American Steel & Wire Div of U S Steel New Haven

Transformers
Berkshire Transformer Corp The New Milford
Dano Electric Company Winsted

Trucks—Commercial
Metropolitan Body Company (International Harvester truck chassis and "Metro" bodies) Bridgeport

Trucks—Industrial
George P Clark Co Windsor Locks

Trucks—Lift
Excelsior Hardware Co The Stamford
George P Clark Co Windsor Locks

Trucks—Skid Platforms
Excelsior Hardware Co The (lift) Stamford

Tube Bending
Donahue Mfg Co Inc Watertown

Tube Clips
H C Cook Co The (for collapsible tubes) 32 Beaver St Ansonia
Weimann Bros Mfg Co The (for collapsible tubes) Derby

Tube Fittings
Scovill Mfg Co ("Uniflare") Waterbury

Tubers
Standard Machinery Co The (tubers for both rubber and plastic industries) Mystic
(Advt.)

Tubes—Collapsible Metal
Sheffield Tube Corp The — New London

Tubing
American Brass Co The (brass and copper) — Waterbury
Bridgeport Brass Company (brass and copper) — Bridgeport
G & O Manufacturing Co (finned) — New Haven
Scoville Manufacturing Company (Brass and Copper) — Waterbury 91

Tubing—Flexible Metallic
American Brass Co Metal Hose Branch — Waterbury

Tubing—Heat Exchanger
American Brass Company The — Waterbury
Scovill Manufcturing Company — Waterbury 91

Tumbling Equipment & Supplies
Tumbling Sales & Service Company — Greenwich

Tumbling Service
Tumbling Sales & Service Company, Esbec Tumbling Division — Meriden

Typewriters
Royal Typewriter Co Inc — Hartford
Underwood Corporation — Hartford

Typewriters—Portable
Royal Typewriter Company Inc — Hartford
Underwood Corporation — Hartford

Typewriter Ribbons and Supplies
Royal Typewriter Company Inc — Hartford
Underwood Corporation — Hatford and Bridgeport

Underclearer Rolls
Sonoco Products Co (Climax-Lowell Div) — Mystic

Vacuum Bottles and Containers
American Thermos Bottle Co — Norwich

Vacuum Cleaners
Electrolux Corporation — Old Greenwich
Spencer Turbine Co The — Hartford

Valves
Norwalk Valve Company (sensitive check valves) — South Norwalk

Valve Discs
Colt's Manufacturing Company — Hartford

Valves—Automobile Tire
Bridgeport Brass Company — Bridgeport

Valves—Radiator Air
Bridgeport Brass Company — Bridgeport

Valves—Relief & Control
Beaton & Caldwell Mfg Co — New Britain

Valves—Safety & Relief
Manning Maxwell & Moore Inc — Stratford

Vanity Boxes
Bridgeport Metal Goods Mfg Co — Bridgeport

Varnishes
Baer Brothers — Stamford
Staminite Corp The — New Haven

Velvets
American Velvet Co (owned and operated by A Wimpfheimer & Bro Inc) — Stonington
Leiss Velvet Mfg Co Inc The — Willimantic
Velvet Textile Corporation The (Velveteen) — West Haven

Venetian Blinds
Findell Manufacturing Company — Manchester
Jennings Company The S Barry — New Haven
New England Shade & Blind Co Inc — Durham

Venetian Blind Tape
Russell Manufacturing Company The (woven cotton and woven plastic) — Middletown

Ventilating Systems
Colonial Blower Company — Plainville

Vertical Shapers
Pratt & Whitney Div Niles-Bement-Pond Co — West Hartford

Vibration Isolation Mountings
MB Manufacturing Company Inc The (for truck engines, aircraft, engine mountings, special machinery) — New Haven

Vibration Testing Equipment
MB Manufacturing Company Inc The — New Haven

Vibrators—Pneumatic
New Haven Vibrator Company (industrial) — New Haven

Vises
Charles Parker Co The — Meriden
Fenn Manufacturing Company The (Quick-Action Vises) — Hartford
Vanderman Manufacturing Co The (Combination Bench Pipe) — Willimantic

Washers
American Felt Co (felt) — Glenville
Auburn Manufacturing Company The (all materials) — Middletown
Blake & Johnson The (brass, copper & non-ferrous) — Waterville

Washers (Continued)
Clark Brothers Bolt Co — Milldale
Plume & Atwood Mfg Co The (brass & copper) — Waterbury
J H Rosenbeck Inc — Torrington
Saling Manufacturing Company (made to order) — Unionville

Washers—Felt
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Washing Machines—Electric
General Electric Company — Bridgeport

Watches
E Ingraham Co The — Bristol
United States Time Corporation The — Waterbury

Water Heaters
Whitlock Manufacturing Co The (instantaneous & storage) — Hartford

Water Heaters—Electric
Bauer & Company Inc — Hartford

Water Heaters—Gas or Kerosene
Holyoke Heater Corp of Conn Inc — Hartford

Waterproof Dressings for Leather
Viscol Company The — Stamford

Waxes
Harrison Company The A S (and other protective coatings) — South Norwalk

Waxes—Floor
Fuller Brush Co The — Hartford

Wedges
Saling Manufacturing Company (hammer & axe) — Unionville

Welding
Farrel-Birmingham Company Inc — Ansonia
G E Wheeler Company (Fabrication of Steel & Non-Ferrous Metals) — New Haven
Industrial Welding Company (Equipment Manufacturers—Steel Fabricators) — Hartford
Porupine Company The — Bridgeport

Welding—Lead
Storts Welding Company (tanks and fabrication) — Meriden

Welding Rods
American Brass Company The — Waterbury
Bristol Brass Co The (brass & bronze) — Bristol

Wheels—Industrial
George P Clark Co — Windsor Locks

Wicks
Auburn Manufacturing Company The (felt, asbestos) — Middletown
Holyoke Heater Corp of Conn Inc — Hartford

Window & Door Guards
Hartford Wire Works Co The — Hartford
Smith Co The John P — New Haven

Window Shades
New England Shade & Blind Co Inc — Durham

Wiping Cloths
Federal Textile Corporation — New Haven

Wire
American Brass Company The — Waterbury
American Steel & Wire Div of U S Steel — New Haven
Atlantic Wire Co The (steel) — Branford
Bartlett Hair Spring Wire Co The (hair spring) — North Haven
Bridgeport Brass Company (brass and silicon bronze) — Bridgeport
Bristol Brass Corp The (brass & bronze) — Bristol
Driscoll Wire Co The (steel) — Shelton
Hudson Wire Co Winsted Div (insulated & enameled magnet) — Winsted
Platt Bros & Co The (zinc wire) P O Box 1030 — Waterbury
Plume & Atwood Mfg Co The (brass, bronze, nickel silver) — Thomaston
Scovill Manufacturing Company (Brass, Bronze and Nickel Silver) — Waterbury 91

Wire and Cable
General Electric Company (for residential, commercial and industrial applications) — Bridgeport

Wire Arches & Trellises
Hartford Wire Works Co The — Hartford
John P Smith Co The 4233-33 Chapel St — New Haven

Wire Baskets
Wiretex Mfg Co Inc (Industrial, for acid, heat, treating and degreasing) — Bridgeport

Wire Cable
Bevin-Wilcox Line Co The (braided) — East Hampton

Wire Cloth
Hartford Wire Works Co The — Hartford
C O Jeliff Mfg Co The (all metal, all meshes) — Southport
Pequot Wire Cloth Co Inc — Norwalk
Rolock Inc (Alloy) — Fairfield
Smith Co The John P — New Haven

Wire Drawing Dies
Waterbury Wire Die Co The — Waterbury

Wire Diping Baskets
Hartford Wire Works Co The — Hartford
John P Smith Co The 423-33 Chapel St — New Haven

Wire Formings
Autoyre Co The — Oakville
G E Prentice Mfg Co The — Kensington
Master Engineering Company — West Cheshire
North & Judd Manufacturing Co — New Britain
Turner & Seymour Manufacturing Co The — Torrington
Verplex Company The — Essex

Wire Forms
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Bristol Spring Manufacturing Co — Plainville
Colonial Spring Corporation The — Hartford
Connecticut Spring Corporation The — Hartford
Foursome Manufacturing Co — Bristol
Humason Mfg Co The — Forestville
New England Spring Mfg Co — Unionville
Templeman Co D R — Plainville

Wire Goods
American Buckle Co The (overall trimmings) — West Haven
Patent Button Co The — Waterbury
Scovill Manufacturing Company (To Order) — Waterbury 91

Wire Partitions
Hartford Wire Works Co The — Hartford
John P Smith Co The 423-33 Chapel St — New Haven

Wire Products
Clairglow Mfg Company — Portland
Humason Mfg Co The — Forestville
Plume & Atwood Mfg Co The (to order) — Waterbury

Wire Reels
A H Nilson Mach Co The — Bridgeport

Wire Rings
American Buckle Co The (pan handles and tinners' trimmings) — West Haven
Humason Mfg Co The — Forestville
Templeman Co D R — Plainville

Wire Rope and Strand
American Steel & Wire Div of U S Steel — New Haven

Wire Shapes
Bridgeport Chain & Mfg Co — Bridgeport

Wire—Specialties
Andrew B Hendryx Co The — New Haven

Wires and Cable
Rockbestos Products Corporation (all asbestos, mining, shipboard and appliance applications) — New Haven

Wooden Boxes
Wallingford Planing Mill Co Inc — Yalesville

Wood Handles
Salisbury Cutlery Handle Co The (for cutlery & small tools) — Salisbury

Wood Scrapers
Fletcher-Terry Co The — Forestville

Woodwork
C H Dresser & Sons Inc (Mfg all kinds of woodwork) — Hartford
Hartford Builders Finish Co — Hartford

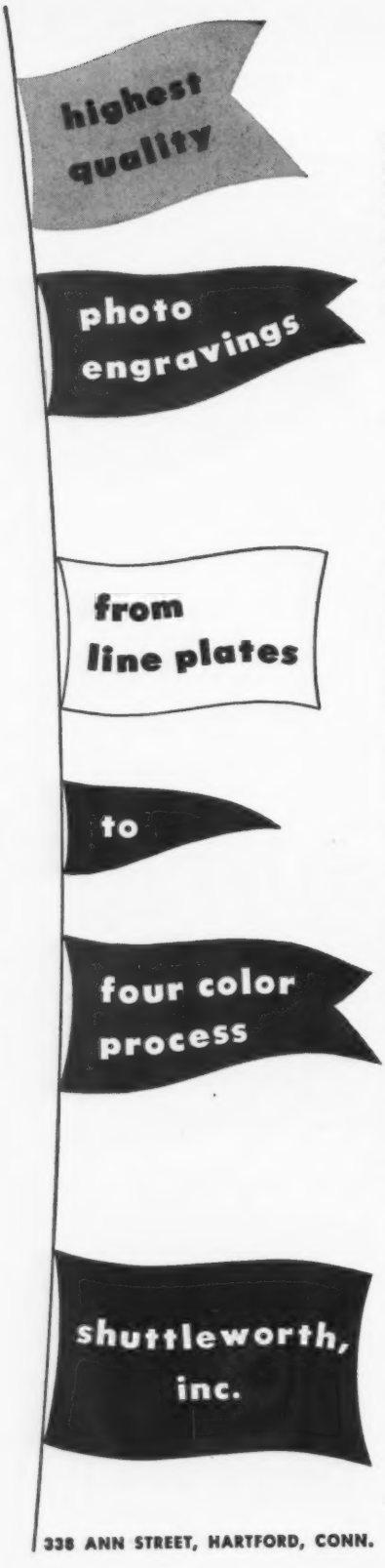
Woodworking
Local Industries Inc — Lakeville

Woven Felts—Wool
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Yarns
Hartford Spinning Incorporated (Woolen, knitting and weaving yarns) — Unionville
Aldon Spinning Mills Corporation The (fine-woolen and specialty) — Talcottville
Ensign-Bickford Co The (jute-carpet) — Simsbury

Zinc
Platt Bros & Co The (ribbon, strip and wire) P O Box 1030 — Waterbury

Zinc Castings
Newton-New Haven Co Inc — 688 Third Ave West Haven (Advt.)



Spotlight on the Future

(Continued from page 59)

Prices show more stability than strength. Inventories are building up. Employment is on the increase. Buying policy continues longer range than in the States. Home building and industrial construction are high. Canadians expect conditions to be good the rest of the year.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, OF CONNECTICUT INDUSTRY, published monthly at Hartford, Conn., October 1, 1954.

STATE OF CONNECTICUT
COUNTY OF HARTFORD

Before me, a Commissioner of the Superior Court, in and for the State and County aforesaid, personally appeared L. M. Bingham, who, having been duly sworn according to law, deposes and says that he is the Editor of the CONNECTICUT INDUSTRY and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication, for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 411, Postal Laws and Regulations, printed on the reverse of this form to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Editor . . . . . L. M. BINGHAM
Publisher . MANUFACTURERS' ASSOC. OF CONN.
Managing Editor . . . . . N. W. FORD

2. That the owner is the Manufacturers' Association of Connecticut, a non-profit corporation.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of bona fide owners, and this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds, and other securities than as so stated by him.

L. M. BINGHAM,
Editor.

Sworn to and subscribed before me this 1st day of October, 1954.

FREDRICK H. WATERHOUSE,
Commissioner of Superior Court.

Service Section

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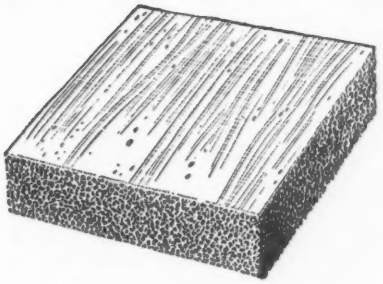
Advertising Index

Allen, Russell & Allen	24
American Appraisal Co.	28
American Microfilming Co.	53
American Thread Co.	Inside Front Cover
Anderson-Nichols	23
Auburn Mfg. Company	45
Baldwin Mfg. Co.	25
Ballard Oil Co., The	Outside Back Cover
Barnes C., Wallace	26
Barney's	28
Bigelow Co., The	35
Bristol Co., The	47
Carwin Co., The	24
Champlin Box Co., The	56
Chase Brass & Copper Co.	34
Clark Bros. Bolt Co.	32
Colonial Blower Co.	49
Connecticut Advertising Service	60
Conn. Medical Service	27
Connecticut Printers, Inc.	3
Connecticut Utility Companies	44
Corrigan, Inc., J. C.	59
Detroit Steel Corp.	33
Dolge Co., C. B.	39
Dominick, Everett	24
Dowd, Wylie & Olson, Inc.	2
Eastern Machinery Co., The	35
Enthone, Inc.	36
Etter Engineering Co.	28
Federal Textile Corporation	28
Gair Company, Robert	37
Goodrich Co., B. F., Sponge Products Div.	Inside Back Cover
Graphic Arts Co., Inc., The	31
Hall Company, Inc., Thomas W.	56
Harper-Leader, Inc.	41
Hartford Special Machinery Co., The	24
Hawkridge-Waterbury Div.	57
Hicks Machine Co.	30
Holm-Hansen, O.	42
Howard Co., The	55
Interstate Industrial Protection Co.	31
J-B Engineering Sales Co.	24
Jones & Company, Inc., T. A. D.	4
Liberty Mutual Insurance	22
Loeb Realty Associates	58
Love, Ralph H.	40
Manufacturers Assoc. of Conn., Inc.	2
Miller Co., The	48
Mills, Inc., H. J.	24
Morris Co., Robert E.	55
Morrissey & Cheney	55
Nutmeg Crucible Steel Co., The	34
Page, Robert W.	32
Plainville Electrical Products Co.	52
Plocar Company, John J.	51
Robertson Paper Box Co., Inc.	2
Sherman Transfer Co., Roger	54
Shuttleworth, Inc.	72
Souther Engineering Co., The Henry	34
Southern New England Telephone Co.	39
Stanley Works, The	56
Swan Tool & Machine Co., The	50
Taylor & Greenough Co., The	42
Tel-Rad, Inc.	25
Topmost Building Co.	50
Travelers Insurance Co.	43
Tumbling Sales & Service Co.	51
Tyler Equipment Corp.	38
Vreeland, K. M.	46
Waterbury Farrel Foundry & Machine Co.	21
Wilco Machine Tool Co.	34
Winship, Richard	34
Wittstein, Jack	29
Wiremold Co., The	31
Worth-Spar Co., Inc., The	34

Check



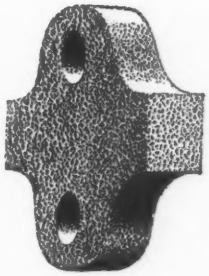
SPONGEX

CELLULAR RUBBER

FOR

✓PAD STOCK

STRIPS
SHEETS
TUBING
CORD
DIE-CUT SHAPES
MOLDED FORMS



Spongex pad stock is natural crude rubber chemically blown to yield a finished material similar to that of the common household sponge. This material is furnished in slabs which can be either sheared or die-cut to specification at our factory or by the customer.

The free expansion process of manufacture causes Spongex pad stock to vary in size. The average is 40″ x 76″ for soft density, 37″ x 50″ for medium, 34″ x 45″ for firm. Standard thickness is 1″ to 2″, with lesser thickness furnished by splitting; greater by cementing.

Standard colors are biege, green, blue and red, other colors on request.

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SPONGEX® *Cellular Materials*

B.F. Goodrich Sponge Products Division
Derby Place, Shelton, Connecticut

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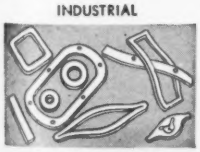
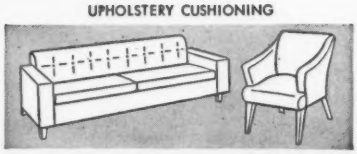


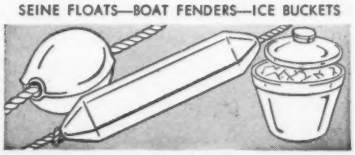
CELLULAR RUBBER

UPHOLSTERY CUSHIONING



TEXLITE RUBBERIZED HAIR—TEXFOAM

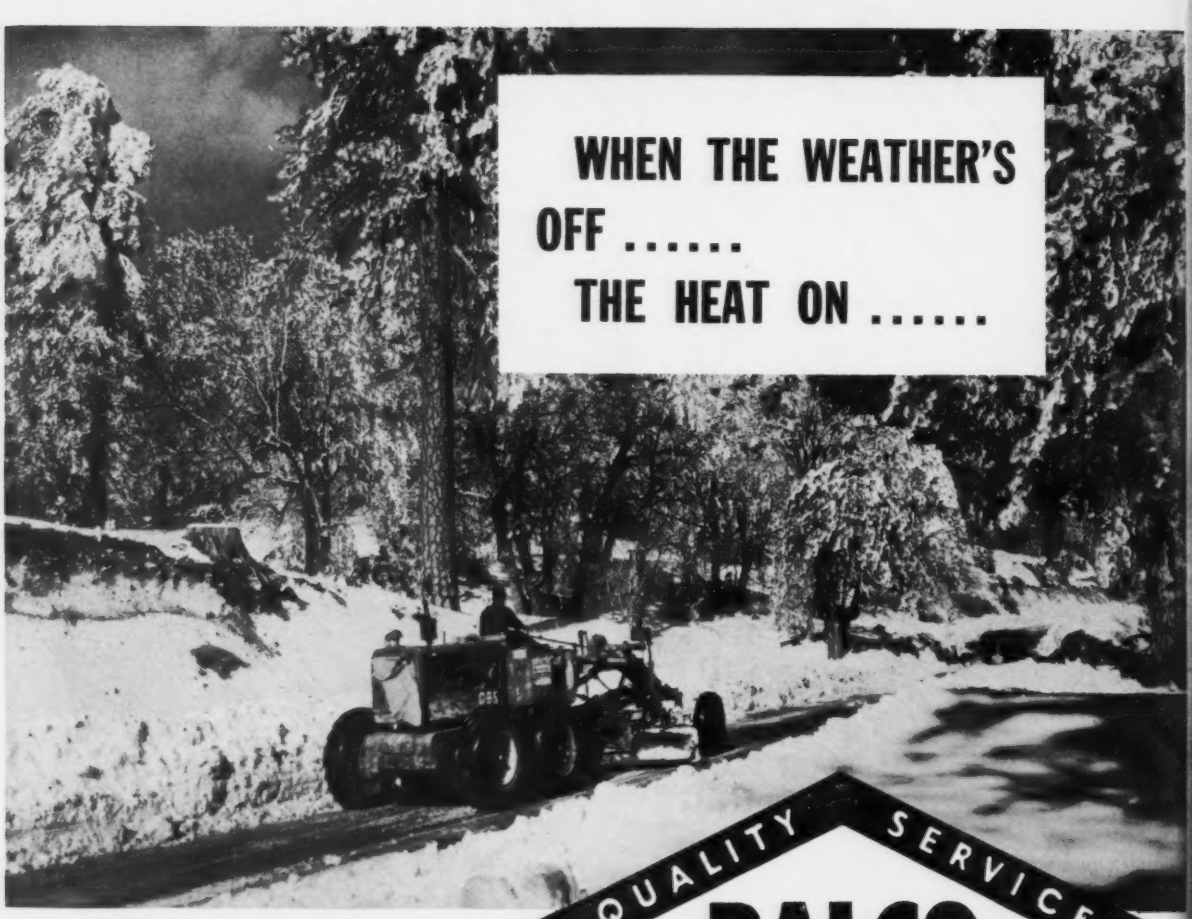
SEINE FLOATS—BOAT FENDERS—ICE BUCKETS



CELLULAR PLASTIC

CARPET CUSHION

SPONGE RUBBER



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HARTFORD, CONNECTICUT